



**Mata Sundri College for Women**  
University of Delhi

# **VOCATIONAL CENTRE**

MATA SUNDRI COLLEGE FOR WOMEN  
(UNIVERSITY OF DELHI)

## **2020-21**



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## 1.1 AN INTRODUCTION

Education, in the true sense, has never been and will never be limited to the mere acquisition of a degree. Apart from facilitating students to enrich their knowledge and skills in a chosen discipline, an educational institution is duty bound to guide its students at every step of the way till the objective is achieved. The objective being to successfully steer their lives in the direction of their chosen career path. Then and only then is an educators' obligation complete.

Mata Sundri College strives for all round development of personality of its students who are capable of shouldering diverse responsibilities and executing them with diligence and vigor. This is aptly met by the involvement of students in various extracurricular activities. We aspire to meet the educational needs of the modern society, upholding the traditional values at the same time.

We are trying to open up new avenues for the better future of students. We, at Mata Sundri College, are dedicated to prove in action our sincere commitment to the above affirmed ideology and have thus introduced vocational courses in addition to our highly reputed degree courses.

At present, three short term UGC sponsored vocational courses have been introduced namely:

Tour and Travel Management      Textile Designing      Computer Applications

Mata Sundri College also offers short term (basic level) courses in various foreign languages. All the courses are conducted as per the International Standards to equip our students with proficiency in the following major foreign languages – French, German and Spanish. They are conducted in collaboration with the Department of Germanic and Romance Studies, University of Delhi.

What is exceptional about the introduction of the short term vocational courses at Mata Sundri College is that they are being offered as add - on courses i.e. students can enroll themselves in the short term vocational course along with degree courses . To facilitate this, the timings for vocational courses have been kept from 2.30 p.m. to 4.30 p.m.

The college possesses modern infrastructure including spacious classrooms, computer laboratory, well equipped library, conference room.

Mata Sundri College is situated in the heart of the city. It is surrounded by famous Delhi land marks like Bal Bhavan and Maulana Azad Medical College on one side and Gurudwara Mata Sundri Ji and Kotla road on the other, all these being a stone's throw from ITO.

Our Vocational Centre is very well equipped and we have the best faculty to teach and guide our students .

In order to give due regard to the competence and potential of its budding talents, we also have a placement cell to facilitate on campus recruitments. Our aim is to provide our students not only with best guidance but also with excellent job opportunities in their chosen career path.



## 1.2 AIMS

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- To strive towards regenerating and upgrading the educational system making it more meaningful and relevant to the newly emerging scenario in the country and to create a highly skilled manpower resource base in the country.
- To impart basic and advance level training to young undergraduate aspirants in the fields of Information Technology, Textile Designing and Travel and Tour Management.
- To establish an academy of international repute and to enable its students to excel in their endeavors worldwide.

## 2.1 ADMISSION SCHEDULE

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- The interested students are to register themselves by filling online admission form available in the college website.
- The admitted students will have to submit 1st installment of fee at the time of admission.
- The classes will commence from **November, 2020**. Late admission is only permitted on getting the permission of the Principal.

## 2.2 Eligibility for Certificate Courses

<b>Minimum Qualification</b>	10+2
<b>Duration of Course</b>	November-July
<b>Selection Criteria:</b> Admission on First Come First Serve Basis. Open for all Regular/NCWEB/SQL students of DU & other institutions	



## 2.3 FEE STRUCTURE

The Annual Fee to be charged from Ist Year students for various courses given below:

### For Certificate Course ( Ist year)

Course	Registration Fee	Course Fee	Total Fee	Mode of Payment **
Computer Applications	200	7000	7200	To be paid at the time of admission
Tour & Travel Management	200	16000 (7000+ 5000+4000)	16200	Altogether or to be paid in 3 installments.
Textile Designing	200	6500 (2500+ 2000+2000)	6700	Altogether or to be paid in 3 installments.
Foreign Languages	200	9000*	9200	To be paid at the time of admission

The Annual Fee to be charged from IInd & IIIrd Year students for various courses given below:

### For Diploma and Advance Diploma Course ( IInd and IIIrd year)

Course	Registration Fee	Course Fee To be paid in 3 installments	Total Fee	Mode of Payment**
Computer Applications	Nil	13000 (6000+4000 +3000)	13000	Altogether or to be paid in 3 installments.
Tour & Travel Management	Nil	16000 (6000+6000 +4000)	16000	Altogether or to be paid in 3 installments.
Textile Designing	Nil	7000 (3000+2000 +2000)	7000	Altogether or to be paid in 3 installments.
Foreign Languages	200	11000*	11200	To be paid at the time of admission

\* including Examination fee.



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**\*\*Mode of payment:** The fee is to be paid through online transactions in college bank account in accordance with the admission schedule.

**Cancellation of Admission and Refund of Fee: Fee is not refundable.**

#### **IMPORTANT NOTE**

- 1st Installment to be paid at the time of admission + Registration fees.
- 2nd Installment from 1st January – 15 January
- 3rd Installment from 1st March - 15 March
- A fine of Rs. 100/- will be charged for late submission of fees.



### 3. COURSES OFFERED

The Centre offers the following Part Time Courses:-

COURSE NAME	DURATION	ELIGIBILITY
1. Certificate Course in Tour & Travel Management	Nov – July	10 + 2 Pass
2. Certificate Course in Textile Designing	Nov – July	10 + 2 Pass
3. Certificate Course in Computer Applications	Nov – July	10 + 2 Pass
4. Certificate Course Foreign Languages	Nov – July	10 + 2 Pass
5. a) Diploma in Tour & Travel Management	Sep – May	Pass in Certificate Course
b) Advance Diploma in Tour & Travel Management	Sep – May	Pass in Diploma Course
6. a) Diploma in Textile Designing	Sep – May	Pass in Certificate Course
b) Advance Diploma in Textile Designing	Sep – May	Pass in Diploma Course
7. a) Diploma in Computer Application	Sep – May	Pass in Certificate Course
(b) Advance Diploma in Computer Application	Sep – May	Pass in Diploma Course
8. (a) Diploma in Foreign Languages	Sep – May	Pass in Certificate Course



## **4. LEARNING OUTCOMES**

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### **4.1 Tour & Travel Management**

Tourism is a booming industry, with an ever increasing requirement for trained & skilled professionals. The course imparts an understanding of different aspects of tourism industry and provides career oriented training and skills. It also lays stress on personality development and communication skills which are vital for a career in travel Industry.

#### **Course Objective**

Acquire essential knowledge and skills to work in the Travel & Tourism Industry and become an effective travel professional. Provide fundamental knowledge of Tourism Industry, Role of Travel Agent, and Services offered by Principal sectors of Tourism and Tour Components. Acquire working skills of International Air Fares Calculation and usage of Global Distribution System to create and manage reservations.

#### **Tour & Travel Management Certificate Course – 1<sup>st</sup> Year**

##### **Travel Theory**

- Introduction to the Travel & Tourism Industry & the Travel Professional
  - The Role of the Travel Agent in the Tourism Industry
  - Business Activities that generate Income
  - Types of Employment in the Travel & Tourism Industry
  - Business Requirements and Commercial Skills
  - Characteristics, Attributes and Skills
- Major International & Regional Organizations
  - IATA, UFTAA, WTO, PATA, TAAI, IATO
  - International Air Transport Regulations
    - The Warsaw Convention
    - The Chicago Convention- ICAO
    - Bilateral Agreement
- Geography in Travel Planning-
  - Marketing & Selling Travel with Geography
  - 5A's to a Successful Destination
- Planning Travel Itineraries
- Travel Formalities
  - Travel Documents- Passport, Visa
  - Health
  - Travel Insurance
- Air Transport Essentials



## **Geography**

- World Geography- Location on the world map
  - Continents & Oceans
  - Countries, Capitals & Cities
  - 3 letter IATA codes for Cities
  - 2 letter IATA codes for Airlines
  - Airlines & their Hubs
- Know Your Own country - India
  - States, Capitals & Cities
  - 3 letter IATA Codes for Cities

## **Tourism - Elements of Tourism**

- Tour packages
  - Types of Tours & Tour components
  - Tour Brochure & Price Quotations
  - Tour Reservations & Accounting Procedures
  - Tour Booking Conditions & Limitations of Liability
  - Study of a Tour Brochure
- Hotels
  - Accommodation Products
  - Language of Accommodation
  - Pricing
  - Reservations Procedures
  - Terms & Conditions
- Railways
  - Introduction to the Railways
  - Rail Products around the world
  - Special Tourist Trains
  - Booking Procedures
- Car & Camper vans
  - The Car Rental Industry
  - Car Rental Procedure – Amenities, Maintenance & Insurance
  - Car Rental Tips
  - Camper Vans Rentals
- Ferries & Cruises
  - History & Origin of Cruises
  - The Growing Industry
  - Cruise Product Features
  - Product Benefits
  - Selling a Cruise



### **Destination Management – Project & Presentations**

- Famous Attractions in Different Regions of India
- Incredible India- States- Places of interests
- Tour Components

### **Tour & Travel Management Diploma Course – 2<sup>nd</sup> Year**

#### **IATA Geography**

- Area/ Sub Area
- Global Indicators

#### **Air Fares & Ticketing**

- Types Of Journey
- Direction of Fares
- Usage of Fares
- Currency Rules
- Currency Rounding
- One Way Journey
- Secondary Level Fares
- Round Trip Journey
- Circle Trip Journey
- Circle Trip Minimum check
- Changing the Fare Break point
- Linear Formatting
- Air-imp Format
- Special Fares

#### **CRS- Computer Reservation Systems (Amadeus)**

- Sign-in & Sign-out
- Encoding & Decoding
- Flight Availability
- PNR Creation
- Seat Request
- Cars
- Hotels
- Fare display
- Itinerary Pricing
- E-Ticketing
- TIMATICS
- Queues



## **Tour & Travel Management Advance Diploma Course – 3<sup>rd</sup> Year**

### **Geography**

- Major Natural Geographical Features

### **International Air- travel**

- Air- Travel Formalities
- Airports of the World
- Airline Alliances & Frequent Flyer Programmes

### **Tourism**

- Types of Travelers
- Types of Tourism
  - Adventure Tourism
  - Medical Tourism
  - Wildlife Tourism
  - Pilgrimage
  - Heritage
  - Eco & Sustainable Tourism

### **Tour Costing**

- Tour Products & Benefits
- Tour Components
- Tour Pricing

### **Advance Air fares & Ticketing**

- Understanding of Normal & Special Fares
- Special Fare Qualifications & working
- Fares Selection Process
- Pricing One Way Journey with BHC check
- Secondary Level Fares
- CT Journeys with changing Fare Break Points
- Pricing Round the World fares with RTW check
- Pricing Mixed Class Journeys
- Pricing Unit Concept
- Limitations on the Indirect Travel
- Side Trips
- Surface sectors
- Lowest Combination Principle



- Currency Conversion
- Taxes
- E-Ticket issuance

### **Destination Management**

- Major World Tourist Destinations & Attractions
- Project & Presentations
  - Airlines & Air Alliances
  - International Destinations as per types of travelers

### **Customer Service and Stress Management\*\***

#### **Soft Skills \*\***

- Resume writing
- Group Discussions
- Interview skills
- Teamwork Skills

In addition to the above major areas of Academic, Personality Development, Behavior and Communication skills are the integral part of the curriculum.

By the end of the course, students are able to

1. Interpret standard industry codes to plan and reserve travel itineraries.
2. Understand airline products, services and facilities for passenger during their travel.
3. Use Global Distribution system to calculate fare and issue e-tickets.
4. Sell rail travel, car rental, hotel accommodation, cruises and pre-packaged tour products.
5. Advise on travel formalities and essential document required.
6. Build a basic domestic/international tour package according to different types of travelers.

#### **Webinars**

1. "Window to your career path" Career Prospects in Travel Industry by Ms. Pinaz Tiwari, Alumna & "Doctorate Researcher with Department of Tourism & Hospitality Management", Jamia Milia Islamia.
2. "Travel & Tourism Industry – The New Normal by Mr Rajat Mathur, Associate Director Carlson Wagonlit Travel Company (CWT) - India.



## **TEXTILE DESIGNING**

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India, besides being a leading manufacturer of the oldest known textile in the world, has a rich heritage of textiles with each state having its treasure of distinct styles of prints, senses of colour, designs, embroideries and handloom textiles. This course is specially designed to develop the senses of colour, designing skills, textiles science, embroidery skills, fashion terminologies and aesthetics in students.

**Fashion design** is the art of application of design and aesthetics or natural beauty to clothing and accessories. Fashion design is influenced by cultural and social latitudes, and has varied over time and place. **Textile design** is essentially the process of creating designs for woven, knitted or printed fabrics or surface ornamented fabrics. Textile designers are involved with the production of these designs.

### **Course Details**

#### **Textile Designing Certificate Course – 1<sup>st</sup> Year**

##### **Basic Design (Theory)**

- Elements of Design
  - Shape, Line, Colour, Texture
- Principles of Design
  - Unity, Harmony, Proportion, Rhythm, Emphasis, Balance
- 3. Structural and Applied Design
- 4. Basic Terminology
  - Fashion design concept

##### **Textile Science (Theory)**

- Fibre Classification
  - Natural Fibres, Manufactured Fibres and their subtypes.
- Textile Fibre Composition
  - Morphology of textile fibres: Monomer, Polymer, Degree of Polymerisation, Crystalline and Amorphous Regions, Orientation of fibres
- Fibre Properties
  - Primary (Essential) and Secondary properties
- Production and Properties of Some Important Fibres
  - Natural fibres: Cotton, Flax, Silk and Wool Man-made fibres: Rayon, Nylon, Polyester, Acrylic, Olefins (Polyethylene and Polypropylene), Elastomeric fibres

##### **Dyeing And Printing (Theory)**

- Introduction to classes of dyes
  - Acid dyes, Basic dyes, Azoic Dyes, Vat Dyes, Direct Dyes, Disperse Dyes and Reactive Dyes.
- Stages of Dyeing
  - Dope dyeing, Fibre dyeing, Yarn dyeing, Fabric and Product stage.
- Styles of printing
  - Direct style, dyed style, resist or reserve style, discharge style
- Methods of printing
  - Printing with block, roller, screen (flatbed and rotary), transfer, digital, flock and laser

##### **Dyeing And Printing (Practical)**

- Block printing
- Screen Printing
- Batik
- Tie and Dye (Different Tying techniques)

##### **Indian Traditional Textiles (Theory And Prac)**

- Traditional Motifs and Stitches of following Indian embroideries
  - Kashida, Phulkari, Chikankari, Kasuti, Kantha etc.
- Printed textiles
  - Ajrakh, Dabu, Bandhani, Ikats

#### **Textile Designing Diploma Course – 2<sup>nd</sup> Year**

##### **Textile Science (Theory)**

- Types of yarns



- Staple and Filament, Simple yarns, Complex yarns
- Yarn construction
  - Mechanical Spinning (Cotton system, Wool system, Worsted system) - Chemical Spinning (Wet, Dry, Melt)
- Yarn properties
  - Yarn Numbering System, Yarn Twist
- Difference between Threads and Yarns
- Different yarns on basis of appearance
  - Textured yarns: Types and properties

### **Dyeing Of Textiles (Theory)**

- General Terminology and Definitions
- Principal, Properties and methodology of application of various dyes
  - Acid dyes, Azoic Dyes, Vat Dyes, Direct Dyes, Disperse Dyes and Sulphur Dyes.
- Brightening agents
  - OBAs and FBAs
- Water in Dyeing
  - Effect of water hardness, Water/Effluent treatment post dyeing
- Analysis of Dyeing
  - Dyeing Defects, Testing of Colour Fastness

### **Dyeing of Textiles (Practical)**

- Dyeing on Cellulosics
  - Direct, Vat, Azo
- Dyeing on Protein Fibres
  - Acid dye

### **Apparel Construction (Theory)**

- Draping, Drafting and Flat pattern making
- Cutting
  - Planning, Drawing, Tools Used, Spreading, Cutting of Fabric.
- Sewing
  - Seams, dart seams, sewing machine parts, sewing needle and types, sewing problems
- Linings and Trims
  - Lining, interlining, interfacing, types of trims.
- Pressing
  - Equipment and methods
- Labels
  - Care Labels and Symbols, Eco-labels

### **Apparel Construction (Practical)**

- Hand and Machine Stitches
- Types of pleats and gathers
- Necklines
- Seams, opening etc

### **Fashion Illustration (Theory+Practical)**

- Sketching + Basic Anatomy
  - Female figure poses, fashion figure proportions
- Basic Garment components and Shape
  - Skirts, Trousers, Sleeves, Cuffs, Collars, Accessories
- Colour mixing and rendering
- Image to illustration

### **Textile Designing Advance Diploma Course – 3<sup>rd</sup> Year**

#### **Weaving And Knitting (Theory)**

- Weaving
  - Parts of a loom
  - Operations and motions of the loom
  - Classification of weaves- construction, characteristics, usage
- Knitting
  - Classification of knits
  - Construction and properties of warp and weft knits



#### Non-wovens

- Types
  - Construction
  - Properties and usage
- Analysis of Wovens and Knits

- Quality tests
- Weaving and Knitting Defects

#### **Apparel Construction (Theory)**

Introduction to measurement

- Measurement on body and dress form

Pattern Details

- Terminology and Classification- collars, sleeves, yokes, empire line, princess line, pocket, placket etc.

Pattern Style

- Skirts, Pants

Figures and designs

- Body shapes and Figure Defects
- Designing for different figure types

#### **Fashion Illustration (Practical)**

Face Analysis

Poses

- 8 head and 10 head Croquis

Moodboard

- Selection of theme, mood board, focus board

Line development

#### **CAD (Practical)**

##### **COREL DRAW**

Introduction to the application

How to use, basic tools

Croquis

Transform tool for repeat development in woven design

##### **PHOTOSHOP - How to use the application, basic tools**

Masking

- Creating mockups, layer mask

Rendering

- Motif development and placements:
- Stylizing to natural, abstract, geometric and ornamental forms Borders, all over, Engineered patterns
- Colourways
- Project
- Create prints based on Art movements/using motifs developed

Dressing Croqui

Dodge and burn tool

#### **Line Development and Tech pack**

By the end of the course, students are able to

1. Identify and apply principles of design; differentiating and analysing good and poor design
2. Developing designs
3. Understand the value chain of fibre production; getting a glimpse of cradle to grave journey of a fibre; attributes of different fibres and their applications: chemical properties of the fibres
4. Application of different class of dyes and their application based on fibre morphology; dyeing processes and their industrial applications; printing techniques, mechanisms and applications
5. Learn about rich textile heritage of India; learning basic stitches; differentiating and identifying various styles



## COMPUTER APPLICATION

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### 1. Introduction to Vocational Course in Computer Applications

Vocational course in Computer Application is offered to the students who are pursuing graduation in Mata Sundri College for Women, University of Delhi. This course aims to introduce the discipline of Computer Applications to the students who wish to either take up entry level jobs in small scale computer industry or use computer technology in study of Humanities. The courses are designed to promote computer literacy, and use and appreciate computer technology in day-to-day life. Inclusion of programming courses promotes logical and analytical thinking.

The curriculum for Computer Application courses was developed by the Department of Computer Application by following the due diligent process. Close consultations were held with the college teachers involved in teaching of the courses. After multiple iterations, the final syllabus.

### 2. Aims of Vocational Course in Computer Applications

The course familiarizes the students with fundamentals of computers hardware and software. It introduces the basic computer technologies and provides hands-on practice in the use of commonly used software in small scale industry. Thus the course provides skills for entry level jobs. The course also inculcates logical and analytical thinking by way of offering programming languages. Modern programming languages like C++ and C# are covered, which enable students to move towards digital humanities. Specifically, the program aims the following achievements for students.

1. To attain understanding of computer technology, their applications and fundamentals.
2. To develop ability to apply knowledge of computing to solve computational problems.
3. To analyze a problem, and identify the computing requirements appropriate to its solution.
4. To design, implement, and evaluate a computer-based system, process or program to meet the desired needs.

### Teaching Learning Process

- Talk and chalk method
- Computer based presentations by teachers to explain selected topics.
- Interactive teaching approach
- Assignments
- Offline and online Quiz
- Presentations by group of students for enhanced learning.



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### **3. Programme Learning Outcomes for Vocational Course in Computer Applications**

The Computer Application Programme has been designed with a year wise approach in mind. By offering such a range of courses after completion of 1st year certification course one is eligible to join 2nd year diploma course. The programming course provides knowledge of programming languages, databases and software application development methodology and the web-designing programme provides knowledge of website designing through a variety of applications. Upon successful completion of the second year, the students would be in the third year course, which deals with some of the advances and emerging aspects in information system. It is felt that at this stage the students would be well equipped to take part in large projects in IT companies and get a flavor for the current challenges in software development and implementation.

**After completion of this course, a student will be able to:**

1. efficiently use Office Automation Tools like word processors, spreadsheets and presentation tools.
2. develop simple programming constructs in a Programming Language (eg. C++)
3. use multimedia authoring tools to design small applications using sound, audio, and video/animation.
4. develop simple websites using HTML/DHTML, CSS and JavaScript programming codes.
5. Develop and implement a simple project based on case studies.



## **Course Details**

**Introduction of Computer:** What is Computer, Applications of Computer, Types of Computer, Generations of computer, Architecture of Computer, Components of Computer System, Central Processing Unit (CPU), Keyboard and Mouse, Other input: tablet, touchpad, scanner, trackball; output Devices: printer, monitor, plotter, Computer Memory (primary and secondary), storage unit, Classification of Computer memory, Concepts of Hardware and Software (system software, application software); Number system: binary, octal, hexa, conversion of number system.

**Introduction to windows & DOS:** MS-Window, Window NT, Window 95, Window 98, Window ME, Window XP, Window Vista, Window 7, Window 8, Window 10, Window 11, Components of Window. What is an Operating System; Basics of Popular Operating Systems; Running an Application, Viewing of File, Folders and Directories, Creating and Renaming of files and folders. View the contents of a directory, Create and delete directories, Copy files, Rename files, Delete files, MS-DOS and command line: internal and external types, Command prompt: Colour change, title change.

**MS Word:** Features of word processor, MS- Word 2007, MS -Word 2010, Document preparation using word processing software: Purpose and characterisation of documents, Word Processing Basics, Menu Bar, Using The Help, Using The Icons Below Menu Bar, Opening and closing Documents, Opening Documents, Save and Save as, Page Setup, Print Preview, Printing of Documents, Text Creation and manipulation, Document Creation, Editing Text, Text Selection, Cut, Copy and Paste, Spell check, Formatting the Text, Font and Size selection, Alignment of Text, Paragraph Indenting, Bullets and Numbering, Changing case, Wrap, Page Setting, Find and replace, Header and footer, Border and shading, background colour, bullets and numbering, table formulation, paragraph and page layout, alignment and justification, charts, Table Manipulation, Draw Table, Changing cell width and height, Alignment of Text in cell, Delete / Insertion of row and column, Border and shading, Formatting of text; Printing of word document, graphs, diagrams, mail merge, Using Smart Art, Using Word Art.



**MS PowerPoint:** Basics Opening A PowerPoint Presentation, Saving A Presentation, Creation of Presentation, Creating a Presentation Using a Template, Creating a Blank Presentation, Entering and Editing Text, Inserting And Deleting Slides in a Presentation, Preparation of Slides, Inserting Word Table or An Excel Worksheet, Adding Clip Art Pictures, Inserting Table, inserting audio and video, Using Smart Art, Inserting Other Objects, Resizing and Scaling an Object, Presentation of Slides, Viewing A Presentation, Choosing a Set Up for Presentation, Printing Slides And Handouts, Slide Show, Running a Slide Show, Transition and Slide Timings, Automating a Slide Show, Taking printouts of presentation.

**MS EXCEL:** Concept of Spreadsheet: Create Worksheets and Workbooks, Create a workbook, Copy and move a worksheet, Search for data within a workbook, Change worksheet tab colour, Rename a worksheet, Change worksheet order, Insert and delete columns or rows, Change workbook themes, Adjust row height and column width, Insert headers and footers, Display formulas, Data Validation, Create custom number formats, Configure data validation, Create custom conditional formatting, Create Tables, Create and Manage Tables, Create an Excel table from a cell range, Convert a table to a cell range, Add or remove table rows and columns, Manage Table Styles and Options, Apply styles to tables, Configure table style options, Insert total rows, Filter and Sort a Table, Filter records, Sort data by multiple columns, Change sort order, Perform Operations with Formulas and Functions, Summarize Data by using Functions, Insert references, Perform calculations by using the SUM function, Perform calculations by using MIN and MAX functions, Perform calculations by using the COUNT function, Perform calculations by using the AVERAGE function, Format text by using UPPER, LOWER, and PROPER functions, Format text by using the CONCATENATE function, Create Charts and Objects: Create Charts, Create a new chart, Format Charts, Resize charts, Add and modify chart elements, Apply chart layouts and styles, Move charts to a chart sheet, Insert text boxes and shapes, Insert images.

**MS Access:** Information Storage and Material: creating, editing, and viewing database, adding, deleting, and undeleting records, searching a database, ordering the database, on a selected key.



**Basic of Networking & Internet:** Concept of networking, LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet; What is ISP; Knowing the Internet; Basics of internet connectivity related troubleshooting, World Wide Web; Web Browsing software, Search Engines; Overview of Internet Browsers, Understanding URL; Domain name; IP Address; http, FTP. Virus: learning various type of virus such as Polymorph virus, Stealth virus Boot Sector virus, file virus, partition table Virus Detection, Prevention and cure, Antivirus. Communications and collaboration: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails.

### **Diploma in Computer Application**

## **Vocational Course (IInd Year) Diploma)**

### **Computer Applications**

### **Overview of Syllabus**

<b>Subject</b>	<b>Topic</b>
<b>INTERNET BASICS</b>	Web Essentials: Clients, Servers, and Communication
<b>HTML</b>	Web Development Introduction
	: HTML-Introduction
	HTML-Basic Formatting Tags
	HTML-Grouping Using Div Span
	HTML-Lists
	HTML-Images



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	HTML-Hyperlink
	HTML-Table
	HTML-Iframe
	HTML-Form
<b>HTML TEST</b>	<b>ASSIGNMENT</b>
<b>CSS</b>	Introduction to Cascading Style Sheets Types of CSS
	ID Selector Tag Selector Class Selector
	CSS Properties Type Properties Background Properties Block Properties Box Properties List Properties Border Properties
<b>CSS TEST</b>	<b>ASSIGNMENTS PPT</b>
PLT	IOP; Programming Languages
PLT	Algorithmn
PLT	Flowchart
<b>PLT Test ( Left)</b>	<b>ASSIGNMENTS</b>
<b>C++</b>	Introduction of C++,Input/Output in C++, Structure of a program,Variables,
	Operators,Data Types, Conditional Structure
	Looping Structure
	Functions, Library Functions



	User Defined Functions
	Array - Single Dimension <ul style="list-style-type: none"><li>• Array - Multi Dimension</li><li>• String - Character Array</li></ul>
	Object Oriented Programming, OOP Concepts
<b>C++ Test</b>	<b>ASSIGNMENTS AND LAB FILES</b>
<b>SQL</b>	Introduction of Database
	DDL
	DML
	DCL
	EXAMPLES
<b>SQL TEST</b>	<b>ASSIGNMENTS AND LAB FILES</b>
<b>COREL DRAW</b>	Module 1. Getting started, Introduction to Corel Draw with Corel Draw, Features of Corel Draw, Corel Draw Interface, Tool Box
	Module 2 .Drawing and Coloring; Selecting Objects; Creating Basic Shapes
	Reshaping Objects Organising objects Applying color fills and Outlines
	Mastering with Text; Introduction; Text Tool; Artistic and paragraph text; Formatting Text; Embedding Objects into text; Wrapping Text around Object; Linking Text to Objects.



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Module 4 .Applying Effects;Introduction; Power of Blends;  
Distortion; Contour Effects;Envelopes;  
Transparency;Creating Depth Effects;Power Clips

Assignment

**PHOTOSHOP**

Types of Image Graphics Introduction to Adobe Photoshop  
Interface Tour of Photoshop Color Modes  
Resolution and Presets Move Tool  
Marque Tool  
Lasso Tool

Quick Selection, Magic Wand Crop, Slicing Tool  
Healing Brush, Patch Tool Brush Tool  
History Brush  
Eraser Tool

Pen Tool, Shape Tool Text Tool  
Layers, Groups and Smart Object  
Blending Options  
Filter Effects



	Create Backgrounds for Web pages
	Create Buttons for Web pages
	ASSIGNMENT (done)
<b>SYSTEM ANALYSIS AND DESIGN</b>	System and Types; System analyst and his roles
	Software Development Life Cycle (SDLC)
<b>SAD TEST</b>	
	Website Project Presentation
	Final Exam



## Advance Diploma Computer Applications

S.No.	Subject	Topic
1	<b>Unit-1 The .Net Framework</b>	Introduction
2		Introduction Common Language Runtime (CLR)
3		Common Type System (CTS)
4		Common Language Specification (CLS)
5		Microsoft Intermediate Language (MSIL)
6		Just-In –Time Compilation
7		Framework Base Classes.
		Data Types, Identifiers, Variables, Constants and Literals
8	Test	
9	<b>Unit-II C# &amp; Object Oriented Programming</b>	Object Oriented Methodology
10		Classes and Objects
11		Functions
		Constructor and Destructor
12		Working with Static Variables and Static Functions,
13		Array
14		Srrings
15		Inheritance
16		Abstraction
17		Virtual Functions and Polymorphism
18	Exception Handling	



		Delegates and Events
19		Test
20	<b>Unit-III ASP.NET</b>	• Introduction to Asp.Net • Standard Controls
21		Textbox Server Control
22		Button Server Control
23		Link Button
24		Image Button
25		Hyperlink
26		Dropdown List & List Box
27		Checkbox x& Checkbox List
28		Radiobutton & Radiobutton List
29		Calendar
30		Adrotator
31		Panel
32		HiddenField
33		FileUpload
34		• Validation Controls
35		• Navigation Controls
36		• Data Controls
38		• State Management
39		• Working with Master Pages
41		• Web Services
42	<b>Unit-IV MSSQL</b>	•Relational database concepts •Structured Query Language



	<b>Server</b>	•Constraints and joins
43		•Stored Procedures
44		•Functions
45		•Triggers
46	<b>Unit-V Ado.Net</b>	•Basics of Ado.net
47		•Programming with Ado.net
		Test
48	<b>Unit-VI Software Engineering</b>	•Introduction
49		Software Requirements Analysis and Specifications: Use Case Approach, Software Requirement Specification Document, Flow oriented Modeling, Data Flow Modeling, Sequence Diagrams
		Software Testing: Strategic Approach to Software Testing, Unit Testing, Integration Testing,
		Validation Testing, System Testing; Black-Box and White Box Testing,
<b>Project</b>	<b>Student Project Work</b>	Development
		Documentation
		Presentation
		Final Exam



## **FOREIGN LANGUAGES**

With the globalization of Indian economy, multinationals coming to India and more and more companies going for joint ventures abroad, the job scenario for those proficient in foreign languages have opened up. The ever increasing amount of scientific, technological and cultural information promises a growing need for those who are able to facilitate international communications. Academic qualifications in foreign languages helps in pursuing careers in the areas of tourism, entertainment, public relations and mass communication, international organizations, embassies, diplomatic service, publishing houses, BPO's etc. More and more avenues are opening up in tourism and call centers. The College offers One Year Certificate Courses in French, German and Spanish in collaboration with the Department of Germanic and Romance Studies, University of Delhi.

### **Certificate in French**

#### **Paper I Communicative French**

(Functional Grammar based on the text book), Prescribed text book:  
le Noyveau Sans Frontiers, Volume I, P. Dominique,  
J.Girardet et al., Cle International Paris, 1989.

#### **Paper II Text Comprehension and Written Expression**

Comprehension of simple texts and precise- writing  
Essay on simple topics, question on civilization  
Translation of simple passage into English and simple sentences into the language of study

#### **Recommended books :**

Conjugaison, (ouvrage collectif), Le Robert and Nathan, Editions Nathan, 1996  
Grammaire, (ouvrage collectif),  
Le Robert et Nathan, Editions Nathan, 1996

#### **Paper III Oral Expression**

(Reading of Texts, general questions on the country and civilization).

### **Certificate in German**

#### **Paper I Communicative German**

(Functional grammar based on the text book)

#### **Prescribed text book:**

Sprachkurs Deutsch 1 and 2, Verlag Moritz, Diesterweg Frankfurt  
amMain1989 / GOYL Saab]  
Publishers and Distributors, New Delhi 1997

#### **Paper II Text Comprehension and Written Expression**

Comprehension of simple texts and precise- writing, Essay on simple topics, question on civilization

Translation of simple passage into English and simple, Sentences into the language of Study

**Recommended books :**

Langenscheidts verb-Tabellen Deutsch, Berlin Munchen / GOYLSaab, Delhi 1994  
Lernziel Deutsch, 1 and 2,(Wolfgang Hieber), Max Hueber Verlag 1991 Langenscheidt Taschenwörterbuch,  
German-English, English- German, GOYLSaab, Delhi, 1994.

**Paper III Oral Expression**

(Reading of Texts, general questions on the country and civilization).

**Certificate in Spanish**

**Paper I Communicative Spanish**

(Functional grammar based on the text book)

Prescribed text book: Expanol en Directo I B,SGEL Ven I, Edelsa 1992

**Paper II Text Comprehension and Written Expression**

- Comprehension of simple texts and precise – writing
- Essay on simple topics, question on civilization
- Translation of simple passage into English and Simple sentences into the Spanish Ven I,Edelsa.

**Paper III Oral Expression**

(Reading of Texts, general questions on the country and civilization).

## **Diploma in Foreign Languages**

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Candidates who have passed the Certificate Examination of the University of Delhi in a language or an examination recognised as equivalent thereto are eligible to apply for admission to the Diploma Course in that language. Admissions will be made strictly in order of merit of the respective certificate course examination.

**Syllabi of Diploma in Foreign Languages Paper I Communicative**

**Grammar-II**

Functional grammar based on the text book.

**Paper II Text Comprehension and Written Expression**

Comprehension of texts on general topics

Essay writing and letter writing

Translation of passages into the foreign language and vice-versa

**Paper III Oral Expression**

Reading and answering questions on the text Expressing opinion and discussing issues of general interests

**Prescribed books**

**Diploma in French:** Le Nouveau Sans Frontieres, Vol. 2, P.Dominique, J. Girardet et al, Cle International, Paris, 1989.  
Ecrire a tout le monde, R. Lichet, coll. Outils, Hachette, 1979.

**Diploma in German:** Tangram, Kursbuch und Arbeitsbuch, 2B, 3A & 3B, Max Hueber Verlag

**Diploma in Spanish:** Español sin fronteras II, SGEL, 1997, Nuevo Ven 2, Edelsa 2004



## **EXAMINATION**

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There will be qualifying examination in both theory and practical at the end of the academic session. Minimum pass percentage will be 50% aggregate. The successful student will be awarded :

- ✓ Certificate in 1st Year,
- ✓ Diploma in 2nd Year and
- ✓ Advance Diploma in 3rd Year.

## **GENERAL RULES**

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- I. All the three courses will be taught in English medium.
- II. 70% attendance is compulsory for all the courses.
- III. Class tests/ Projects/ Assignments should be submitted on the dates announced by the teachers. No late submission will be allowed. Internal assessments will be evaluated on submission.
- IV. The marks of all the class tests will be added in the final exams.
- V. No re-exams will be allowed. Failures will be required to take re-admission.
- VI. Attendance will not be given to students coming late for the class.
- VII. Students will not be permitted to leave the class until the class is over.
- VIII. Minimum passing percentage will be 50% for the courses.
- IX. Class timings will be 4:00-6:00 p.m. in online mode till further notice.
- X. Students will bear the loss or damage of any item related to the course.
- XI. As soon as the student enters the class, mobile phones should be switched off. If anyone is found using the mobile phone, a heavy fine will be charged.
- XII. Fee should be submitted on the given dates otherwise, a fine of Rs. 100/- per day will be charged for the late submission of fee.
- XIII. \*No misbehavior will be tolerated in the class.

## **Sample Assignments**

Practical exercises based on MS Word/Open Office tools using document preparation and spreadsheet handling packages.

### **Text Editor**

1. Prepare a grocery list having four columns (without table, using tab) (Serial number, Name of the product, Quantity and Price) for the month of March, 19.
  - Font specifications for Title (Grocery List): 14-point Arial font in bold and italics.
  - The headings of the columns should be in 12-point and bold.
  - The rest of the document should be in 10-point Times New Roman.
  - Leave a gap of 12-points after the title.
2. Create a telephone directory having 2 columns.
  - The heading should be 16-point Arial Font in bold
  - The rest of the document should use 10-point font size
  - Other headings should use 10-point Courier New Font.
  - The footer should show the page number as well as the date last updated.
3. Design a time-table form for your college.
  - The first line should mention the name of the college in 16-point Arial Font and should be bold.
  - The second line should give the course name/teacher's name and the department in 14-point Arial.
  - Leave a gap of 12-points.
  - The rest of the document should use 10-point Times New Roman font.
  - The footer should contain your specifications as the creator and date of creation.
4. BPB Publications plans to release a new book designed as per your syllabus. Design the first page of the book as per the given specifications.
  - The title of the book should appear in bold using 20-point Arial font.
  - The name of the author and his qualifications should be in the center of the page in 16-point Arial font.
  - At the bottom of the document should be the name of the publisher and address in 16-point Times New Roman.
  - The details of the offices of the publisher (only location) should appear in the footer.
5. Create the following one page documents.
  - a. Compose a note inviting friends to a get-together at your house, including a list of things to bring with them.
  - b. Design a certificate in landscape orientation with a border around the document.
  - c. Design a Garage Sale sign.



d. Make a sign outlining your rules for your bedroom at home, using a numbered list.

6. Create the following documents:

- (a) A newsletter with a headline and 2 columns in portrait orientation, including at least one image surrounded by text.
- (b) Use a newsletter format to promote upcoming projects or events in your classroom or college.

7. Convert the given text to a table, using comma as delimiter

8. Enter the data into a table given below for 10 salespersons

Salesperson	Dolls	Trucks	Puzzles

Add a column Region (values: S, N, N,S,S,S) between the Salesperson and Dolls columns to the given table  
Sort your table data by Region and within Region by Salesperson in ascending order:

Add a new row to the table, place the word "Total" at the bottom of the Salesperson column, and sum the Dolls, Trucks, and Puzzles columns.

9. Create a document with wrapping of text around the image.

Spreadsheet

1. Enter the data in Excel worksheet for 5 different states in the format given

below: REGIONAL SALES PROJECTION

State	Qtr1	Qtr2	Qtr3	QTR4	Qtr Total	Rate	Amount
-------	------	------	------	------	-----------	------	--------

Total average

(a) Apply Formatting as follow:

- I. Title in TIMES NEW ROMAN
  - ii. Font Size - 14
  - iii. Remaining text - ARIAL, Font Size -10
  - iv. State names and Qtr. Heading Bold, Italic with Gray Fill Color.
  - v. Numbers in two decimal places.
  - vi. Qtr. Heading in center Alignment.
  - vii. Apply Border to whole data.
- (b) Calculate State and Qtr. Total  
(c) Calculate Average for each quarter  
(d) Calculate Amount = Rate \* Total.

2. Given the following worksheet for 10 different students in the format given below:

Roll No.	Name	Marks	Grade
----------	------	-------	-------

Calculate the grade of these students on the basis of following guidelines:If

Marks	Then Grade
$\geq 80$	A+
$\geq 60 < 80$	A
$\geq 50 < 60$	B
$< 50$	F

3. Enter the data for 8 different salesmen in a worksheet in the format given below:

	A	B	C	D	E	F	G
1	Salesman			Sales in			
	n			(Rs.)			

Calculate the commission earned by the salesmen on the basis of the following criteria:If Total

Sales	Commission
$< 20000$	0% of sales
$> 20000$ and $< 25000$	4% of sales
$> 25000$ and $< 35000$	6% of sales
$\geq 35000$	8% of sales

The total sales is sum of sales of all the four quarters.

4. A company XYZ Ltd. pays a monthly salary to its employees which consists of basic salary, allowances & deductions. The details of allowances and deductions are as follows:

Allowances

- HRA Dependent on Basic
  - 30% of Basic, if Basic  $\leq 1000$
  - 25% of Basic, if Basic  $> 1000$  & Basic  $\leq 3000$
  - 20% of Basic, if Basic  $> 3000$
- DA Fixed for all employees, 30% of Basic
- Conveyance Allowance Rs. 50/- if Basic is  $\leq 1000$  Rs. 75/- if Basic  $> 1000$  & Basic  $\leq 2000$  Rs. 100 if Basic  $> 2000$
- Entertainment Allowance NIL, if Basic is  $\leq 1000$  Rs. 100/- if Basic  $> 1000$

Deductions

- Provident Fund 6% of Basic
- Group Insurance Premium Rs. 40/-, if Basic is  $\leq 1500$  Rs. 60/-, if Basic  $> 1500$  & Basic  $\leq 3000$  Rs. 80/-, if Basic  $> 3000$

Calculate the following:

Gross Salary = Basic + HRA + DA + Conveyance + Entertainment  
 Total deduction = Provident Fund + Group Insurance Premium  
 Net Salary = Gross Salary – Total Deduction



- (a) Compute the total revenue earned.
- (b) Plot the line chart to compare the revenue of all publishers for 4 years.
- (b) Chart Title should be 'Total Revenue of Sam's Bookstall (1997-2000)'
- (c) Give appropriate categories and value axis title.

**10.** Generate 25 random numbers between 0 & 100 and find their sum, average and count. Howmany no. are in range 50-60

**Practical List for DBMS:**

1. Create a database having two tables with the specified fields, to computerize a library system of a Delhi University College.  
LibraryBooks (Accession number, Title, Author, Department, PurchaseDate, Price)  
IssuedBooks (Accession number, Borrower)
  - a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
  - b) Delete the record of book titled "Database System Concepts".
  - c) Change the Department of the book titled "Discrete Maths" to "CS".
  - d) List all books that belong to "CS" department.
  - e) List all books that belong to "CS" department and are written by author "Navathe".
  - f) List all computer science books (Department="CS") that have been issued.
  - g) List all books which have a price less than 500 or purchased between "01/11/2018" and "01/01/2019".



- h) Delete the book with accession number 1211.
2. Create a database having three tables to store the details of students of Computer Department in your college.  
Personal information about Student (College roll number, Name of student, Date of birth, Address, Marks(rounded off to whole number) in percentage at 10 + 2, Phone number)  
Paper Details (Paper code, Name of the Paper)  
Student's Academic and Attendance details (College roll number, Paper code, Attendance, Marks in home examination).
- Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
  - Design a query that will return the records (from the second table) along with the name of student from the first table, related to students who have more than 75% attendance and more than 60% marks in paper 2.
  - List all students who live in "Delhi" and have marks greater than 60 in paper 1.
  - Find the total attendance and total marks obtained by each student.
  - List the name of student who has got the highest marks in paper 2.
  - Update the name of the paper with Paper code "P1" from "Introduction to Computers" to "Computer Science Fundamentals".
3. Create the following tables and answer the queries given below:  
Customer (CustID, Email, Name, Phone, AlternatePhone, ReferrerID)  
Bicycle (BicycleID, DatePurchased, Color, CustID, ModelNo)  
BicycleModel (ModelNo, Manufacturer, Style)  
Service (StartDate, BicycleID, EndDate)
- Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
  - Delete the column AlternatePhone from the Customer table.
  - List all the customers who have the bicycles manufactured by manufacturer "Honda".
  - List the bicycles purchased by the customers who have been referred by customer "C1".
  - List the manufacturer of red colored bicycles.
  - List the models of the bicycles given for service.
4. Create the following tables, enter at least 5 records in each table and answer the queries given below.  
Employee ( Employee\_ID, Person\_Name, Street, City )  
Works ( Employee\_ID, Company\_ID, Salary )  
Company( Company\_ID, Company\_Name, City )  
Manages ( Employee\_ID, Manager\_ID)
- Identify primary and foreign keys.
  - Alter table employee, add a column "Email" of type varchar(20).
  - Find the name of all managers who work for both Samba Bank or NCB Bank.
  - Find the names, street address and cities of residence and salary of all employees who work for "Samba Bank" and earn more than Rs.10,000.
  - Find the names of all employees who live in the same city as the company for which they work.
  - Find the highest salary, lowest salary and average salary paid by each company.
  - Find the sum of salary and number of employees in each company.

- h) Find the name of the company that pays the highest payroll.
5. Create the following tables, enter at least 5 records in each table and answer the queries given below.

Suppliers (SNo, Sname, Status, SCity)

Parts (PNo, Pname, Colour, Weight, City)

Project (JNo, Jname, Jcity)

Shipment (Sno, Pno, Jno, Quantity)

- a) Identify primary and foreign keys.
- b) Get supplier numbers for suppliers in Paris with status greater than 20.
- c) Get suppliers details for suppliers who supply part P2. Display the supplier list in increasing order of supplier numbers.
- d) Get suppliers names for suppliers who do not supply part P2.
- e) For each shipment get full shipment details, including total shipment weights.
- f) Get all the shipments where the quantity is in the range 300 to 750 inclusive.
- g) Get part nos. for parts that either weigh more than 16 pounds or are supplied by suppliers S2, or both.
- h) Get the names of cities that store more than two red parts.
- i) Update the city of S1 supplier to "Delhi".
- j) Get part numbers for part supplied by a supplier in Allahabad to a project in Chennai.



### Practical exercises based on HTML.

1. Create HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes, HorizontalLine, Blinking text as well as marquee text.
2. Create HTML document with Ordered and Unordered lists, Inserting Images, Internal and External linking
3. Create HTML document with Table:


4. Create Form with Input Type, Select and Text Area in HTML.
5. Create an HTML containing Roll No., student's name and Grades in a tabular form.
6. Create an HTML document (having two frames) which will appear as follows:

About Department 1 Department 2 Department 3	This frame would show the contents according to the link clicked by the user on the left frame.
-------------------------------------------------------	-------------------------------------------------------------------------------------------------

7. Create an HTML document containing horizontal frames as follows:

Department Names (could be along with Logos)
Contents according to the Link clicked

8. Create a website of 6 – 7 pages with different effects as instructed in the laboratory session.
9. Create HTML documents (having multiple frames) in the following formats:

Frame1
Frame2

Frame 1	
Frame 2	Frame 3

10. Create a form using HTML which has the following types of controls:

- I. Text Box
- II. Option/radio buttons
- III. Check boxes
- IV. Reset and Submit buttons

### Subscribe to XYZ News Magazine and Emails

Interested in receiving daily small updates of all latest News? Well, now you can. And best of all, it is free! Just fill out this form and submit it by clicking the "send it In" button. We will put you on our mailing list and you will receive your first email in 3-5 days.

Please fill the following boxes to help us send the emails and our news letter:

First Name:

Last Name:

Business:

We must have a correct e-mail address to send you the news letter:

Email:

How did you hear about XYZ News Magazine and Emails?

Here on the Web  In a magazine  Television  Other

Would you like to be on our regular mailing list?

Yes, we love junk emails



11. Create a static web page using HTML to show the following table on the screen with 4 different entries

Specification table with hours and marks

No	Title	Teaching hours	Distribution of Marks		
			A level	B Level	Total
I					
II					
III					
IV					

12. Print 10 names with a line break between each name. The list should be alphabetized, and to do this place a subscripted number next to each name based on where it will go in the alphabetized list. (Example: Alan<sub>1</sub>). Print first, the un-alphabetized list with a subscript number next to each name, then the alphabetized list. Both lists should have an <h1> level heading.
13. Create Form with Input Type, Select and Text Area in HTML.
14. Create a web page using list tags of HTML to show the following information on web page.

## Assignment for C++

1. Write a program to check whether the input number is even or odd.
2. Write a program that reads an integer value and prints “leap year” or “not a leap year”.
3. Write a program to compare three numbers and print the largest one.
4. Write a program to print factors of a given number.
5. Write a method to calculate GCD of two numbers.
6. WAP to calculate total marks, percentage and grade of a student. Marks obtained in each of the three subjects are to be input by the user. Assign grades
  
7. Using for loop and while loop , print a table of feet/centimeter equivalences. Let f be the height in feet ranging from 5 to 6 ft in step of 0.1ft. For each value of f, print the corresponding height in centimeter.
8. Write a program to add N natural numbers and display the total.
9. Write a program that takes a positive integer n and then produces n lines of output shown as follows.

For example enter a size: 5

```
*  
**  
***  
****  
*****
```

10. Write a menu-driven program, using user-defined functions to find the area of rectangle, square, circle and triangle by accepting suitable input



parameters from user.

11. Write a function that takes an integer 'n' as input and calculates the value of  $1 + 1/1! + 1/2! + 1/3! + \dots + 1/n$
12. Write a function that takes an integer input and calculates the factorial of that number.
13. Write a program to generate Fibonacci series.
14. Write a function that takes a string input and checks if it's a palindrome or not.
15. Write a list function to convert a string into a list, as in list ('abc') gives [a, b, c].
16. Write a program to implement linear and binary search on lists.
17. Write a program to sort a list using insertion sort.

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