



# INDIAN SCHOOL DARSAIT DEPARTMENT OF ICT



**Subject:**Computer Science

**Topic:** Class & Object

**Worksheet No.:**4

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**Date:**\_\_\_\_\_

**Name of the Student :**\_\_\_\_\_

**Class &Div:**XII \_

**Roll Number :**\_\_\_\_

1. Define a class TAXPAYER in C++ with following description :

Private members :

- Name of type string
- PanNo of type string
- Taxabincm (Taxable income) of type float
- TotTax of type double

Public members :

- A function INTAX( ) to enter data for the tax payer
- A function CompTax( ) to calculate tax according to the following slab:

Taxable Income	Tax%
Up to 160000	0
>160000 and <=300000	5
>300000 and <=500000	10
>500000	15

- A function OUTAX( ) to allow user to view the content of all the data members.

2. Define a class Applicant in C++ with following description:

Private Members

- A data member ANo ( Admission Number) of type long
- A data member Name of type string
- A data member Agg(Aggregate Marks) of type float
- A data member Grade of type char
- A member function GradeMe( ) to find the Grade as per the Aggregate Marks obtained by a student. Equivalent Aggregate marks range and the respective Grades are shown as follows

<u>Aggregate Marks</u>	<u>Grade</u>
> = 80	A
Less than 80 and > = 65	B
Less than 65 and > = 50	C
Less than 50 and > = 33	D
Less than 33	E

Public Members

- A function Enter( ) to allow user to enter values for ANo, Name, Agg & call function GradeMe( ) to find the Grade
- A function Result ( ) to allow user to view the content of all the data members.

3. Define a class TEST in C++ with following description: 4

Private Members

- TestCode of type integer
- Description of type string
- NoCandidate of type integer
- CenterReqd (number of centers required) of type integer
- A member function CALCNTR() to calculate and return the number of centers( $\text{NoCandidates}/100+1$ )

Public Members

- A function SCHEDULE() to allow user to enter values for TestCode, Description, NoCandidate & call function CALCNTR() to calculate the number of Centres
- A function DISPTTEST() to allow user to view the content of all the data members

4.

Write the definition of a class PIC in C++ with following description :

Private Members

- Pno //Data member for Picture Number (an integer)
- Category //Data member for Picture Category (a string)
- Location //Data member for Exhibition Location (a string)
- FixLocation //A member function to assign //Exhibition Location as per category //as shown in the following table

Category	Location
Classic	Amina
Modern	Jim Plaq
Antique	Ustad Khan

Public Members

- Enter() //A function to allow user to enter values //Pno, category and call FixLocation() function
- SeeAll() //A function to display all the data members

5. Define a class candidate in C++ with following Description:

Private Members

- A data member RNo (Registration Number) of type long
- A data member Name of type string
- A data member Score of type float
- A data member Remark of type string
- A member function AssignRem( ) to assign Remarks as per the Score obtained by a candidate. Score range and the respective Remarks are shown as follows:

Score	Remarks
$\geq 50$	Selected
less than 50	Not selected

Public members

- A function ENTER( ) to allow user to enter values for RNo, Name, Score & call function AssignRem() to assign the remarks.
- A function DISPLAY( ) to allow user to view the content of all the data members.

6.

Define a class Tourist in C++ with the following specification :

**Data Members**

- Carno - to store Bus No
- Origin - to store Place name
- Destination - to store Place name
- Type - to store Car Type such as 'E' for Economy
- Distance - to store the Distance in Kilometers
- Charge - to store the Car Fare

**Member Functions**

- A constructor function to initialize Type as 'E' and Freight as 250
- A function CalcCharge() to calculate Fare as per the following criteria :

Type	Charge
'E'	16*Distance
'A'	22*Distance
'L'	30*Distance
- A function Enter() to allow user to enter values for Carno, Origin, Destination, Type and Distance. Also, this function should call CalcCharge() to calculate Fare.
- A function Show() to display the content of all the data members on screen.

7. Define a class RESORT in C++ with following description:

**Private Members:**

- Rno // Data member to store Room No
- Name // Data member to store customer name
- Charges // Data member to store per day charges
- Days // Data member to store number of days of stay
- COMPUTE() // A function to calculate and return Amount as Days\* Charges and if the value of Days \* Charges is more than 11000 then as 1.02 \* Days \* Charges

**Public Members :**

- Getinfo() // A function to enter the content Rno, Name, Charges and Days
- Dispinfo() // A function to display Rno, Name, Charges, Days and Amount (Amount to be displayed by calling function COMPUTE() )