

St. Mary's School, Dwarka
Holiday Homework
Class XII
Subject: Informatics Practices

Note: Answer the following in your respective notebooks

Q1 Fill in the blanks

1*5 = 5

1. _____ is the process in which a program is validated and _____ is the process in which the errors in the program are removed
2. The _____ is a selective structure where several possible constant values are checked for specific value
3. A Java Program executes but doesn't give the desired output and will not terminate from the terminal window. Then this is a _____ error in the program
4. A _____ statement in a Java Programming is enclosed in braces
5. Generally, for the fixed iterations _____ loop can be used and for the variable iterations _____ loop can be used.

Q2 a) What is the Syntax for :

2*2=4

- (i) for loop
- (ii) do...while loop

Q3. What are the differences between :

- a) if ...else and switch...case ? 2
- b) Entry controlled loop and exit controlled loop ? 2

Q4 (a) What is the role of keyword 'void' in Java in declaring a function ? 2

b) Write the output of the following program segment : 2

```
public static void output() {
```

```
String n = "Computer Knowledge";
```

```
String m = "Computer Applications";
```

```
System.out.print(n.substring(0,8).concat(m.substring(9)));
```

```
System.out.print(n.endsWith('e')); }
```

Q.5. What is foreign Key? What is its purpose? 2

Q.6. Define the terms Tuple and Attribute 2

Q.7. What do you understand by the terms Cardinality and Degree of the table? 2

Q.8. What are DDL and DML? 2

Q.9. What is the difference between Where and Having Clause ? 2

Q.10. What do you understand by constraints ? 2

Q.11. What are group Functions or Aggregate functions? 2

Q12. A programmer is required to develop a student record. The school offers two different streams, medical and non-medical, with different grading criteria.

The following is the data entry screen used to calculate percentage and grade.

5

- (1) Write the code to disable the txtPercentage and the txtGrade text fields.
- (2) Write the code for the cmdClear button to clear all the text fields.
- (3) Write the code for the cmdCalcPerc button to calculate the percentage to display in text field txtPercentage, after finding the total marks of first term and second term (assuming that both marks are out of 100).
- (4) Write the code for the cmdCalcGrade button to calculate the grade to display in text field txtGrade, depending on the stream selected according to the criteria in the following table:

Stream	Percentage	Grade
Medical	>= 80	A
	60 - 80	B
	< 60	C
Non Medical	>= 75	A
	50 - 75	B
	< 50	C

Q13 ABN Shipment Corporation imposes charges to customers for different product .The shipment company costs for an order in two forms: Wholesalers and Retailers . The cost is calculated on unit basis as follows:

6

For units	Price for wholesalers(per unit)	Price for retailers(per unit)
1-15	Rs.50/-	Rs.60/-
16-20	Rs.45/-	Rs.55/-
21-30	Rs.40/-	Rs.50/-
31-50	Rs.35/-	Rs.45/-
>50	Rs.30/-	Rs.40/-

1) Write the code to disable the text boxes txtTCost and Wholesaler as default option when the form is active.

(2) Write the code for Calculate Cost command button(cmdCalc) to

(i) Display the discount price in txtDisc if special customer is selected. Discount is at the rate of 10% of Total cost.

(ii) To display total cost.(Total cost = Ordered Unit * Unit Price-Discout Price)

(3) Write the code for Exit Button (cmdExit) to exit the application.

Q14 Computech Company has number of employees who are divided into four grades as per their basic pay as the following: 6

GRADE I	Basic : Rs.20,000p.m or more	GRADE II	Basic : Rs.15,000 p.m. more but less than.10,000
D.A	: 40% of Basic	D.A.	: 40% of Basic
H.R	: 30%of Basic	H.R.	: 25% of Basic
GRADE III	Basic : Rs. 15,000 p.m. or more but less than Rs. 12,000	GRADE IV	Basic : Rs. 12,000 p.m. or less
D.A.	: 30% of Basic	D.A.	: 30% of Basic
H.R.	: 20% of Basic	H.R.	: 15% of Basic

If the salary, which is the total of Basic, D.A. and H.R.A. calculate the tax as follows:
Annual SalaryTax

Less than 150000	-	
>=150000 and <250000		10%
>=250000		15%

(i) Write the code for Calculate button to find the DA, HRA, Gross, Annual Salary, Total Tax, Monthly Tax, and Netsalary.(Gross=Salary+DA+HRA)(Net =Gross -Monthly Tax), (Total tax=Annual Salary

* Tax%), (Annual Salary = Monthly Gross salary *12) (Monthly Tax = Total Tax /12)

(ii) Write the code for Exit button to exit application.

Q15 Hotel Hill Top Inn in Ooty plan to go for computerization in order to meet the workload during tourist session. There are three types of rooms available in Hill Top.

Hotel Hill Top

Customer Name	<input type="text"/>	Room type <input checked="" type="radio"/> Single <input type="radio"/> Double <input type="radio"/> Delux
No of days	<input type="text"/>	
Rate	<input type="text"/>	
Cost of facilities	<input type="text"/>	
Amount	<input type="text"/>	
		Facilities <input checked="" type="checkbox"/> Tour package <input type="checkbox"/> GYM <input type="checkbox"/> Laundry
<input type="button" value="Calculate rate"/>		<input type="button" value="Clear"/> <input type="button" value="Exit"/>
		<input type="button" value="Calculate Amount"/>

- (a) Write the code to disable the text boxes txtRate,txtAmount.txtFacility when the form activated. (b)Write the code for cmdClear command button to clear all the textboxes. (c)Write the code for cmdRate to calculate rate of the room per day and display it in txtRAte depending on the type of room selected by the customer. Rate is calculated according to the following table:

Room Type	Rate per day
Single	1500
Double	2800
Delux	5000

- (d)Write the code for cmdAmount to calculate the total amount and display it in txtAmount.The total amount is calculated by first finding the cost of facilities selected by the customer. Cost of facilities is calculated according to the following table:

Facility	Cost
Tour Package	7000
Gym	2000
Laundry	1000

Q16 a) Write SQL commands for the following queries :

Table Club

$$1 * 5 = 5$$

Coach-ID	CoachName	Age	Sports	date_of_app	Pay	Sex
1	Kukreja	35	Karate	27/03/1996	1000	M
2	Ravina	34	Karate	20/01/1998	1200	F
3	Karan	34	Squash	19/02/1998	2000	M
4	Tarun	33	Basketball	01/01/1998	1500	M
5	Zubin	36	Swimming	12/01/1998	750	M
6	Ketaki	36	Swimming	24/02/1998	800	F
7	Ankita	39	Squash	20/02/1998	2200	F
8	Zareen	37	Karate	22/02/1998	1100	F

9	Kush	41	Swimming	13/01/1998	900	M
10	Shailya	37	Basketball	19/02/1998	1700	M

To show all information about the swimming coaches in the club.

To list the names of all coaches with their date of appointment (date_of_app) in descending order.

To display a report showing coach name, pay, age, and bonus (15% of pay) for all coaches.

To insert a new row in the Club table with ANY relevant data:

Give the output of the following SQL statements:

Select COUNT(Distinct Sports) from Club;

Select Min(Age) from Club where SEX = "F";

b) Write SQL commands for the following queries :

1*5 =5

FURNITURE

NO	ITEMNAME	TYPE	DATEOFSTOCK	PRICE	DISCOUNT
1	White lotus	Double Bed	23/02/02	30000	25
2	Pink feather	Baby cot	20/01/02	7000	20
3	Dolphin	Baby cot	19/02/02	9500	20
4	Decent	Office Table	01/01/02	25000	30
5	Comfort zone	Double Bed	12/01/02	25000	25
6	Donald	Baby cot	24/02/02	6500	15
7	Royal Finish	Office Table	20/02/02	18000	30
8	Royal tiger	Sofa	22/02/02	31000	30
9	Econo sitting	Sofa	13/12/01	9500	25
10	Eating Paradise	Dining Table	19/02/02	11500	25

ARRIVALS

NO	ITEMNAME	TYPE	DATEOFSTOCK	PRICE	DISCOUNT
1	Wood Comfort	Double Bed	23/03/03	25000	25
2	Old Fox	Sofa	20/02/03	17000	20
3	Micky	Baby cot	21/02/03	7500	15

To show all information about the Baby cots from the FURNITURE table.

To list the ITEMNAME which are priced at more than 15000 from the FURNITURE table.

To list ITEMNAME and TYPE of those items, in which date of stock is before 22/01/02 from the FURNITURE table in descending of ITEMNAME.

To display ITEMNAME and DATEOFSTOCK of those items, in which the discount percentage is more than 25 from FURNITURE table.

To count the number of items, whose TYPE is "Sofa" from FURNITURE table.

To insert a new row in the ARRIVALS table with the following data:

14, "Valvet touch", "Double bed", {25/03/03}, 25000,30

Give the output of following SQL stateme

Note: Outputs of the above mentioned queries should be based on original data given in both the tables i.e., without considering the insertion done in (f) part of this question.

Select COUNT(distinct TYPE) from FURNITURE;

Select MAX(DISCOUNT) from FURNITURE,ARRIVALS;

Select AVG(DISCOUNT) from FURNITURE where TYPE="Baby cot";

Select SUM(Price) from FURNITURE where DATEOFSTOCK<{12/02/02};

Q6 c) Write SQL queries for (a) to (f) and write the outputs for the SQL queries mentioned shown in (g1) to (g4) 1*8=8

parts on the basis of tables ITEMS and TRADERS:

Table Items:

CODE	INAME	QTY	PRICE	COMPANY	TCODE
1001	DIGITAL PAD 12i	120	11000	XENITA	T01
1006	LED SCREEN 40	70	38000	SANTORA	T02
1004	CAR GPS SYSTEM	50	21500	GEOKNOW	T01
1003	DIGITAL CAMERA 12X	160	8000	DIGICLICK	T02
1005	PEN DRIVE 32GB	600	1200	STOREHOM	T03

TRADERS

TCode	TName	CITY
T01	ELECTRONIC SALES	MUMBAI
T03	BUSY STORE CORP	DELHI
T02	DISP HOUSE INC	CHENNAI

To display the details of all the items in the ascending order of item names (i.e. INAME).

To display item name and price of all those items, whose price is in range of 10000 and 22000 (both values inclusive).

To display the number of items, which are traded by each trader. The expected output of this query should be:

T01 2

T02 2

T03 1

To display the price, item name and quantity (i.e. qty) of those items which have quantity more than 150.

To display the names of those traders, who are either from DELHI or from MUMBAI.

To display the names of the companies and the names of the items in descending order of company names.

g1) `SELECT MAX(PRICE), MIN(PRICE) FROM ITEMS;`

g2) `SELECT PRICE*QTY AMOUNT FROM ITEMS WHERE CODE=1004;` g3) `SELECT DISTINCT TCODE FROM ITEMS;`

g4) `SELECT INAME, TNAME FROM ITEMS I, TRADERS T WHERE I.TCODE=T.TCODE AND QTY<100;`

Q17. Research on the topic "USE OF TECHNOLOGY IN FINDING THE OIL RESERVES. Find out about five such technologies and how they can be used. Prepare a report on the same.