Object Oriented Programming

JAVA

WEEK-1

Evaluation Pattern

Continuous Evaluation	60%
Record: 4M, Viva: 6M, Execution: 10M Internal Marks: 3 * 20 = 60 Marks	
Lab Examination	**40%**
• End Semester Lab evaluation: 40 Marks, write Up: 15 Marks, execution: 25 Marks, • Total: 15+25 = 40 Marks Examination of 2 hours duration (Max. Marks: 40)	

Evaluation Weeks

W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12
		R+E	V		R+E	V		R+E	V		END SEM

R --- RECORD
E --- EXECUTION
V --- VIVA

1. Create a class name “GreatestNumber” and define a method that displays the greatest among the three-given number. [Use Scanner Class]

2. A Taxi service offers a new post paid service for the distance based on recharge fare. Implement using Java to calculate the total distance that can be travelled by considering following charges. First 5 KM = INR 10, Next 15 KM = INR 8, Next 25 KM = INR 5. (Note: maximum fare=300)

3. For given a 9-digit registration number of DSE student, identify the year of joining. Assuming the first two digits specify the year of joining.

4. For a given date of birth of a person, calculate the date of retirement by taking years of service as input

1. Create a class name “GreatestNumber” and define a method that displays the greatest among the three-given number.

Input (a, b, c)	Expected output
12, -112, 0	12
23, 45, 15	45
-1, -15, -30	-1
-1, 0, 1	1
12, 12, 12	12, all values are same
24, 35, c	Error

2. A Taxi service offers a new post paid service for the distance based on recharge fare. Implement using Java to calculate the total distance that can be travelled by considering following charges. First 5 KM = INR 10, Next 15 KM = INR 8, Next 25 KM = INR 5. (Note: maximum fare=300)

Input (Enter fare)	Expected output (Distance Traveled)
222.0	30.4
56.89	5.86
-130.0	Error
12.e0	Error

3. For given a 9-digit registration number of DSE student, identify the year of joining. Assuming the first two digits specify the year of joining.

4. For a given date of birth of a person, calculate the date of retirement by taking years of service as input

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HAPPY
CODING

Bonus Program-1

Department of Computer Applications has two courses, namely, B.Tech DSE and MCA. After conduction of first Internals, the department staff needs to calculate each student's total marks of all the core subjects. For this issue, create a student class with regno, name, sub1, sub2, sub3, courseName as the data members. The internals marks are calculated based on the following formula for:

B.Tech – 50% of sub1 + 25% of sub2 + 25% of sub3

MCA – 40% of sub1+30% of sub2 + 30% of sub3

Display minimum of 3 students in each course with respective subjects marks and total internal marks based on the formula considering 3 core subjects.

Bonus Program-1

Student name	Course	Sub1 OOP	Sub2 Data Structures	Sub3 Data Analystics	Total
Clark Kent	DSE	45	40	48	44.5
Peter Paker	MCA	46	42	38	42.4
Tony Stark	DSE	45	44	43	44.25
Diana Spencer	DSE	45	48	44	43
Bruce Lee	MCA	49	47	48	48.1
Natasha	MCA	41	43	47	43

Bonus Program-2

We have a student project team called “JavaHackers”. Currently we are looking forward to assign responsibilities to students for which we need to select a team leader. Based on the student’s seniority we have to select the team leader. So, consider a class JavaHacker with following attributes with following type:

a. studentName : String
b. SID : String
c. YOJ : Date
d. Course: String
e. curSemester: int
f. Department: String

Add randomly 5 students record, sort them according to YOJ and print them all. Then check for the student having YOJ and curSemester as highest and print him/her as team leader for the project team JavaHackers. (Note: exclude year back options.)

Bonus Program-2

Student Name	SID	YOJ	CourseName	Current Semester	Department
James Bond	MIT19ICT023	2019	ICT	5	ICT
Johnny English	MIT18CSE056	2018	CSE	7	CSE
Pepper Potts	MIT20DSE034	2020	DSE	3	DCA
Nick Fury	MIT20ME016	2020	ME	3	ME
Nebulla	MIT19ICE023	2019	ICE	5	ICE

Output: The Team Lead is Johnny English