



COURSE: (CL-1004) OBJECT ORIENTED PROGRAMMING LAB

LAB TASK # 3

WEIGHTAGE: 2

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**NOTE:**

Only submit .cpp file of each question in a folder. Anyone who submits any other format file will get straight **ZERO**. Each question should have a separate .cpp file. Copy Paste or other UFM will also get **ZERO**. Use the following format for naming the folder Roll#\_Name (P18-1234\_NAME).

**Q No.01: Problem (Statement)**

Develop a calculator which is able to handle two numbers. The calculator can perform addition, subtraction, multiplication, and division.

**Q No.01: Problem (Analysis)**

- ❖ Ask the user to enter two numbers
- ❖ Then ask to enter the operator (+, -, /, \*)
- ❖ Calculate the result
- ❖ Display the result

Note: use if else-if else statement for solving this problem.

**Problem (Output)**

```
Enter first number:      400
Enter second number:    200
Enter operator (+, -, /, *) : +
400 + 200 = 600
```

```
Enter first number:      300
Enter second number:    400
Enter operator (+, -, /, *) : *
300 * 400 = 1200
```

```
Enter first number:      500
Enter second number:    100
Enter operator (+, -, /, *) : /
500 / 100 = 5
```

### Q No.02: Problem (Statement)

Develop a calculator which is able to handle two numbers. The calculator can perform addition, subtraction, multiplication, and division.

### Q No.02: Problem (Analysis)

- ❖ Ask the user to enter two numbers
- ❖ Then ask to enter the operator (+, -, /, \*)
- ❖ Calculate the result
- ❖ Display the result

Note: use switch statement for solving this problem.

### Problem (Output)

```
Enter first number:          400
Enter second number:         200
Enter operator (+,-,/,*) :   +
400 + 200 = 600
```

```
Enter first number:          300
Enter second number:         400
Enter operator (+,-,/,*) :   *
300 + 400 = 1200
```

```
Enter first number:          500
Enter second number:         100
Enter operator (+,-,/,*) :   /
500 + 100 = 100
```

### Q No.03: Problem –3 (Statement)

Write a program that takes grade as an input from the user and depending upon the grade display the message. Following is the criteria:

- If grade is 'A' then display “Excellent”
- If grade is 'B' then display “Very Good”
- If grade is 'C' then display “Good”
- If grade is 'D' then display “Poor”
- If grade is 'F' then display “Fail”

Note: use switch statement for solving this problem.

### QNo.03: Problem –3 (Output)

```
Please enter the student's grade :    A
Excellent
```

```
Please enter the student's grade :    F
Fail
```

```
Please enter the student's grade :    H
Enter grade from A to D or F
```

**What will happen if user enters lower letter?**

### QNo.04: Problem –4 (Output)

Write a program that takes grade as an input from the user and depending upon the grade display the message. Following is the criteria:

- If grade is 'A' or 'a' then display “Excellent”
- If grade is 'B' or 'b' then display “Very Good”
- If grade is 'C' or 'c' then display “Good”
- If grade is 'D' or 'd' then display “Poor”
- If grade is 'F' or 'f' then display “Fail”

Note: use switch statement for solving this problem.

### Q No.04: Problem –4 (Output)

```
Please enter the student's grade :    A
Excellent
```

```
Please enter the student's grade :    f
Fail
```

```
Please enter the student's grade :    H
Enter grade from A to D or F
```

**Q No.05: Problem –5 (Statement)**

In a company, there are deductions from the salary of the employees for a fund. The deductions rules are as follows:

- If salary is less than Rs.10,000 then no deduction
- If salary is equal to or more than Rs.10,000 and less than Rs.20,000 then deduct Rs.1,000 as fund
- If salary is equal to or more than 20,000 then deduct 7 % of the salary for fund
- Input salary from user and after appropriate deduction show the net payable amount.