Atta Lab 4

Q1)

```c
// Online C compiler to run C program online
#include<stdio.h>

int main(){
    int number, x;
    printf("Input a number: ");
    scanf("%d", &number);
    x = number%3;
    switch (x) {
        case 0:
            printf("\nNumber is a multiple of 3");
            break;
        default:
            printf("\nNumber is not a multiple of 3");
            break;
    }
    return 0;
}
```

```
/tmp/utaXEMioUp.o
Input a number: 63

Number is a multiple of 3

=== Code Execution Successful ===
```

Q2)

main.c

Share Run

```c
// Online C compiler to run C program online
#include<stdio.h>

int main() {
    printf("Enter an Operator (+,-,*,/): ");
    char operator;
    scanf("%c", &operator);
    printf("\nEnter Number 1: ");
    float num1;
    scanf("%f", &num1);
    printf("\nEnter Number 2: ");
    float num2;
    scanf("%f", &num2);
    float result;
    switch (operator) {
        case '+':
            result = num1 + num2;
            printf("\n%.2f %c %.2f = %.2f", num1, operator, num2, result);
            break;
        case '-':
            result = num1 - num2;
            printf("\n%.2f %c %.2f = %.2f", num1, operator, num2, result);
            break;
        case '*':
            result = num1 * num2;
            printf("\n%.2f %c %.2f = %.2f", num1, operator, num2, result);
            break;
        case '/':
            result = num1 / num2;
            printf("\n%.2f %c %.2f = %.2f", num1, operator, num2, result);
            break;
        default:
            printf("\nInvalid Operator");
            break;
    }
    return 0;
}
```

Output

```
/tmp/jk2eBlYJqN.o
Enter an Operator (+,-,*,/): /

Enter Number 1: 4

Enter Number 2: 2

4.00 / 2.00 = 2.00

=== Code Execution Successful ===
```

Q3)

main.c

Share Run

```c
// Online C compiler to run C program online
#include<stdio.h>

int main() {
    char abc;
    printf("Enter a character: ");
    scanf("%c", &abc);

    if (abc>=65 && abc<=90) {
        printf("\nThe character is a CAPITAL LETTER");
    } else if (abc>=97 && abc<=122) {
        printf("\nThe character is a SMALL LETTER");
    } else if (abc>=48 && abc<=57) {
        printf("\nThe character is a NUMBER");
    } else {
        printf("\nThe character is a SPECIAL CHARACTER");
    }

    return 0;
}
```

Output

```
/tmp/MSsGO5zW77.o
Enter a character: B

The character is a CAPITAL LETTER

=== Code Execution Successful ===
```

Q4)

main.c

Share Run

```c
// Online C compiler to run C program online
#include<stdio.h>

int main() {
    printf("Input Total Cost: ");
    float cost;
    scanf("%f", &cost);

    if (cost<0) {
        printf("\nInvalid Input");
    } else if (cost>=0 && cost<500) {
        printf("\nZero Discount\nYou have to pay Rs. %.2f", cost);
        printf("\nYou saved Rs. 0");
    } else if (cost>=500 && cost<2000) {
        float final, discount = 5;
        final = (100-discount)*(cost)/100;
        printf("\n5%% Discount\nYou have to pay Rs. %.2f", final);
        printf("\nYou saved Rs. %.2f", cost-final);
    } else if (cost>=2000 && cost<4000) {
        float final, discount = 10;
        final = (100-discount)*(cost)/100;
        printf("\n10%% Discount\nYou have to pay Rs. %.2f", final);
        printf("\nYou saved Rs. %.2f", cost-final);
    } else if (cost>=4000 && cost<6000) {
        float final, discount = 20;
        final = (100-discount)*(cost)/100;
        printf("\n20%% Discount\nYou have to pay Rs. %.2f", final);
        printf("\nYou saved Rs. %.2f", cost-final);
    } else {
        float final, discount = 35;
        final = (100-discount)*(cost)/100;
        printf("\n35%% Discount\nYou have to pay Rs. %.2f", final);
        printf("\nYou saved Rs. %.2f", cost-final);
    }
    return 0;
}
```

Output

```
/tmp/w9lZytUbmU.o
Input Total Cost: 2679

10% Discount
You have to pay Rs. 2411.10
You saved Rs. 267.90

=== Code Execution Successful ===
```

Q5)

main.c

Share Run

```c
// Online C compiler to run C program online
#include<stdio.h>

int main() {
    printf("Enter Your Name Initial: ");
    char A;
    scanf("%c", &A);

    printf("\nEnter your ID: ");
    int ID;
    scanf("%d", &ID);
    printf("\nEnter units used: ");
    int units;
    scanf("%d", &units);
    float cpu, bill = 0;

    switch (units) {
        case 0 ... 199:
            bill = bill + units*16.2;
            cpu = 16.2;
            break;
        case 200 ... 299:
            bill = bill + units*20.1;
            cpu = 20.1;
            break;
        case 300 ... 499:
            bill = bill + units*27.1;
            cpu = 27.1;
            break;
        default:
            bill = bill + units*35.9;
            cpu = 35.9;
            break;
    }
    if (bill>18000) {
        float newbill = bill;
        bill = bill*1.15;
        float surcharge = bill - newbill;
        printf("\nCustomerID: %d\nCustomer Name Initial: %c\nUnits Used: %d\nCharges per
            Unit: %.2f\nAmount before surchage: %.2f\nSurcharge: %.2f\nNet Amount: %.2f",
            ID, A, units, cpu, newbill, surcharge, bill);
    } else {
        printf("\nCustomerID: %d\nCustomer Name Initial: %c\nUnits Used: %d\nCharges per
            Unit: %.2f\nSurcharge=0\nNet Amount: %.2f", ID, A, units, cpu, bill);
    }
    return 0;
}
```

Output

```
/tmp/51aUgABvQv.o
Enter Your Name Initial: A

Enter your ID: 19

Enter units used: 800

CustomerID: 19
Customer Name Initial: A
Units Used: 800
Charges per Unit: 35.90
Amount before surchage: 28720.00
Surcharge: 4308.00
Net Amount: 33028.00

=== Code Execution Successful ===
```

Q6)

main.c

Share Run

```c
#include<stdio.h>

int main() {
    printf("Enter a positive number: ");
    int num;
    scanf("%d", &num);

    if (num<=0) {
        printf("\nInvalid Input");
    } else {
        switch (num) {
            case 1:
                printf("\none"); break;
            case 2:
                printf("\ntwo"); break;
            case 3:
                printf("\nthree"); break;
            case 4:
                printf("\nfour"); break;
            case 5:
                printf("\nfive"); break;
            case 6:
                printf("\nsix"); break;
            case 7:
                printf("\nseven"); break;
            case 8:
                printf("\neight"); break;
            case 9:
                printf("\nnine"); break;
            default:
                printf("\ngreater than 9"); break;
        }
    }

    return 0;
}
```

Output

```
/tmp/hwOY7d4jNQ.o
Enter a positive number: 7

seven

=== Code Execution Successful ===
```