Assignment 02

CODE (Fig. 01)

Assignment > 02 > C 01_MonthsPrint_using_Switch_case.c > ...

```c
/** Write a C program that reads an integer between 1 and 12 and prints the month of
the year in English using Switch-case.
Author: Jolok Banarjee, Id: 21014026, AE-02, Aerospace, BSMRAAU*/
#include<stdio.h>
main()
{
    int monthNumber;
    printf("Enter an interger number between 1 to 12 :"); //Number will represent MonthNUmber
    scanf("%d",&monthNumber);
    switch(monthNumber){
        case 1 :
        printf("JANUARY");
        break;
        case 2 :
        printf("FEBRUARY");
        break;
        case 3 :
        printf("MARCH");
        break;
        case 4 :
        printf("APRIL");
        break;
        case 5 :
        printf("MAY");
        break;
        case 6 :
        printf("JUNE");
        break;
        case 7 :
        printf("JULY");
        break;
        case 8 :
        printf("AUGUST");
        break;
        case 9 :
        printf("SEPTEMBER");
        break;
        case 10 :
        printf("OCTOBER");
        break;
        case 11 :
        printf("NOVEMBER");
        break;
        case 12 :
        printf("DECEMBER");
        break;
        default:
        printf("INVALID NUMBER!");
    }
    return 0;
}

```

OUTPUT (Fig. 02)

```
Enter an interger number between 1 to 12 :5
MAY
PS E:\Code\CSE 4192>
```

CODE (Fig. 03)

Assignment > 02 > C 02_LeapYear_or_not.c > main()

```c
/* •    Write a C program to find whether a given year is a leap year or not.
Author: Jolok Banarjee, Id: 21014026, AE-02, Aerospace, BSMRAAU */
#include<stdio.h>
int main(){
    int a;
    printf("Enter Year : (check is leap year or not?)");
    scanf("%d",&a);
    if(a%400==0){
        printf("Leap year");
    }
    else if(a%100!=0 && a%4==0){
        printf("Learp year");
    }
    else{
        printf("Not Leap year");
    }
    return 0;

}
```

## OUTPUT (Fig. 04)

```
Enter Year : (check is leap year or not?)2022
Not Leap year
PS E:\Code\CSE 4192>
```

## CODE (Fig. 05)

Assignment > 02 > C 03_Whether_is_it_alphabet_digit_or_Special_Character.c > main()

```c
/*  Write a C program to check whether a character is an alphabet, digit or special character.
Author: Jolok Banarjee, Id: 21014026, AE-02, Aerospace, BSMRAAU */
#include <stdio.h>
int main(){
    //97-122 = a-z ASCII value
    //65-90 = A-Z ASCII value
    //48-57 = 0-9 ASCII value
    char ch;
    printf("Enter the Character, digit or special character:");
    scanf("%c",&ch);
    if(ch<=122 && ch>=97){
        printf("%c It is lowercase alphabet",ch);
    }
    else if (ch<=90 && ch>=65){
        printf("%c It is uppercase alphabet",ch);
    }
    else if (ch<=57 && ch>=48){
        printf("%c It is a digit",ch);
    }
    else {
        printf("%c It is a Special Character");
    }
    return 0;
}
```

## OUTPUT (Fig. 06)

```
Enter the Character, digit or special character:t
t It is lowercase alphabet
PS E:\Code\CSE 4192>
```

## CODE (Fig. 07)

Assignment > 02 > C 04_Gross_Salary.c > ...

```c
/* Write a C program to input the basic salary of an employee and calculate its Gross salary according to the following:
Basic Salary <= 23000 BDT: HRA = 55%, Medical = 8%
Basic Salary <= 35000 BDT: HRA = 40%, Medical = 8%
Basic Salary > 35000 BDT : HRA = 35%, Medical = 8%
Author: Jolok Banarjee, Id: 21014026, AE-02, Aerospace, BSMRAAU */
#include<stdio.h>
int main(){
    float basicSalary,HRA,Medical, Total;
    printf("Enter Your Basic Salary: ");
    scanf("%f",&basicSalary);
    if (basicSalary<=23000){
        HRA = basicSalary * 0.55;
        Medical = basicSalary * 0.08;
    }
    else if (basicSalary>23000 && basicSalary<=35000){
        HRA = basicSalary * 0.4;
        Medical = basicSalary * 0.08;
    }
    else{
        HRA = basicSalary * 0.35;
        Medical = basicSalary * 0.08;
    }
    Total= basicSalary + HRA + Medical;
    printf("The Gross salary is %0.2f",Total);
    return 0;
}
```

## OUTPUT (Fig. 08)

```
Enter Your Basic Salary: 40000
The Gross salary is 57200.00
PS E:\Code\CSE 4192>
```

Lab Work 02

CODE (Fig. 01)

Class > Class-2 > C 01_Grade_System.c > main()

```c
#include<stdio.h>
int main()
{
    int mark;
    printf("Enter the mark :");
    scanf("%d",&mark);
    if( mark>=80 ){
        printf("You Got A+");
    }
    else if (mark>=70 && mark<80){
        printf("You Got A");
    }
    else if (mark>=60 && mark<70){
        printf("You Got A-");
    }
    else if (mark>=50 && mark<60){
        printf("You Got B");
    }
    else if (mark>=40 && mark<50){
        printf("You Got C");
    }
    else if (mark<40){
        printf("You Failed!, It's Better Try Again");
    }
    return 0;
}
```

OUTPUT (Fig. 02)

```
Enter the mark :85
You Got A+
PS E:\Code\CSE 4192>
```

CODE (Fig. 03)

Class > Class-2 > C 02_Max_Number.c > main()

```c
#include<stdio.h>
int main()
{
    int num1,num2,num3;
    printf("Enter the number1:");
    scanf("%d",&num1);
    printf("Enter the number2:");
    scanf("%d",&num2);
    printf("Enter the number3:");
    scanf("%d",&num3);
    if(num1>num2 && num1>num3){
        printf("The Maximun Number is %d",num1);
    }
    else if(num2>num1 && num2>num3){
        printf("The Maximum Number is %d",num2);
    }
    else if(num3>num2 && num3>num1){
        printf("The Maximun Number is %d",num3);
    }
    return 0;
}
```

OUTPUT (Fig. 04)

```
Enter the number1:45
Enter the number2:34
Enter the number3:80
The Maximun Number is 80
PS E:\Code\CSE 4192>
```

CODE (Fig. 05)

Class > Class-2 > C 03_Switch_Case.c > main()

```c
#include<stdio.h>
int main()
{
    char operator;
    double _1st, _2nd;
    printf("Enter an operator (+, -, *, /) :");
    scanf("%c", &operator);
    printf("Enter the 1st Number & 2nd Number:");
    scanf("%lf %lf",&_1st,&_2nd);
    switch (operator){
        case '+':
        printf("%lf + %lf = %lf",_1st,_2nd,_1st+_2nd);
        break;
        case '-':
        printf("%lf - %lf = %lf",_1st,_2nd,_1st-_2nd);
        break;
        case '*':
        printf("%lf * %lf = %f",_1st,_2nd,_1st*_2nd);
        break;
        case '/':
        printf("%lf / %lf =%lf",_1st,_2nd,_1st/_2nd);
        break;
        default:
        printf("Error! Operator is not Identified");
    }
return 0;
}
```

OUTPUT (Fig. 06)

```
Enter an operator (+, -, *, /) :*
Enter the 1st Number & 2nd Number:20
30
20.000000 * 30.000000 = 600.000000
PS E:\Code\CSE 4192>
```