Assignment 1

If-else
1. Finding F from C (temp).

```c
#include <stdio.h>
void main()
{
    int CL = 010;
    float fr = (9.0 / 5.0) * CL + 32;
    printf("Temparature In Celcius is :%d \n", CL);
    printf("Temparature In Feranhite is :%f", fr);

}
```

Output :
Temparature In Celcius is :8
Temparature In Feranhite is :46.400002
PS C:\Code>

2. Finding area and perimeter of rectangle or circle.

```c
#include <stdio.h>
void main()
{
    int L = 15, W = 45;
    int areaOfRect = L * W;
    int periMeter = 2 * (L + W);
    printf("Length of Rectangle: %d, Width: %d \nArea of Reactangle:
%d \n", L, W, areaOfRect);
    printf("Perimeter of Reactangle: %d \n ", periMeter);

    printf("\n");

    float radious = 9.0;
    const float PI = 3.14;
    float Circumference = 2.0 * PI * radious;
    float areaOfCircle = PI * (radious * radious);
    printf("Radious of circle is: %f \nCircumference of that circle
is: %f \n", radious, Circumference);
    printf("Area of that circle is: %f \n", areaOfCircle);
}
```

Output :

PS C:\Code> & 'c:\Users\bhagv\.vscode\extensions\ms-vscode.cpptools-1.21.6-win32-x64\.....:\TDM-GCC-64\bin\gdb.exe' '--interpreter=mi'

Length of Rectangle: 15, Width: 45

Area of Reactangle: 675

Perimeter of Reactangle: 120

Radious of circle is: 9.000000

Circumference of that circle is: 56.520000

Area of that circle is: 254.340012

PS C:\Code>

3. Accept a 3 digit number from user and find the sum of the digits and also reverse the number

```c
#include <stdio.h>
void main()
{
    int num = 234;
    int sum = 0;
    int rev = 0;

    int r1 = num % 10;
    int q1 = num / 10;

    sum += r1;
    rev = (rev * 10) + r1;

    r1 = q1 % 10;
    q1 /= 10;

    rev = (rev * 10) + r1;
    sum += r1;

    r1 = q1 % 10;
    q1 /= 10;

    rev = (rev * 10) + r1;
    sum += r1;

    printf("Sum of %d digits is: %d \n Also Reverse of num: %d",
num, sum, rev);
}
```

Output :
Sum of 234 digits is: 9
Also Reverse of num: 432
PS C:\Code>

4. Check if the given number is even or odd.

```c
#include <stdio.h>
void main()
{
    int num = 7;
    if (num % 2 == 0)
    {
        printf("Number %d is Even.", num);
    }
    else
    {
        printf("Number %d is Odd.", num);
    }
}
```

Output :

PS C:\Code> & 'c:\Users\bhagv\.vscode\extensions\ms-vscode.cpptools-1.21.6-win32-x64\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-t051go41.zaq' '--stdout=Microsoft-MIEngine-Out-n0kfklnm.lli' '--stderr=Microsoft-MIEngine-Error-3hiuyso4.uvj' '--pid=Microsoft-MIEngine-Pid-langrl2h.tb3' '--dbgExe=C:\TDM-GCC-64\bin\gdb.exe' '--interpreter=mi'

Number 7 is Odd.

PS C:\Code>

5. Calculating total salary based on basic. If basic <=5000 da, ta and hra will be 10%,20% and 25% respectively otherwise da, ta and hra will be 15%,25% and 30% respectively.

```c
#include <stdio.h>
void main()
{
    float baseSalary = 7777.0, totalSalary;
    float DA, TA, HRA;
    if (baseSalary <= 5000)
    {
        DA = 0.10 * baseSalary;
        // printf(" DA %f \n", DA);
        TA = 0.20 * baseSalary;
        // printf(" TA %f \n", TA);
        HRA = 0.25 * baseSalary;
        // printf(" HRA %f \n", HRA);
        //  totalSalary = DA + TA + HRA + baseSalary;
        // printf("Total Salary for bsae %f is : %f ", baseSalary,
totalSalary);
    }
    else
    {
        DA = 0.15 * baseSalary;
        // printf(" DA %f \n", DA);
        TA = 0.25 * baseSalary;
        // printf(" TA %f \n", TA);
        HRA = 0.30 * baseSalary;
        // printf(" HRA %f \n", HRA);
        // float totalSalary = DA + TA + HRA + baseSalary;
        // printf("Total Salary for bsae %f is : %f ", baseSalary,
totalSalary);
    }
    totalSalary = DA + TA + HRA + baseSalary;
    printf("Total Salary for bsae %f is : %f ", baseSalary,
totalSalary);
}
```

Output :

```
PS C:\Code>  & 'c:\Users\bhagv\.vscode\extensions\ms-vscode.cpptools-1.21.6-win32-x64\debugAdapters\bin\.....:\TDM-GCC-64\bin\gdb.exe' '--interpreter=mi'

Total Salary for bsae 7777.000000 is : 13220.900391

PS C:\Code>
```

6. Write a program to check if person is eligible to marry or not (male age >=21 and female age>=18).

```c
#include <stdio.h>
void main()
{
    int maleAge = 25, femaleAge = 29;
    char gender = 'f';
    if (gender == 'f' && femaleAge >= 18 || gender == 'm' && maleAge
>= 21)
    {
        printf("Eligible to marry");
    }else{
        printf("Not Eligible to marry");
    }
}
```

OutPut :

```
PS C:\Code>  & 'c:\Users\bhagv\.... \gdb.exe' '--interpreter=mi'

Eligible to marry

PS C:\Code>
```

Assignment 1 Using FunctionTyp1

```c
#include <stdio.h>
void tempConvert();
void areaAndPerimetere();
void sumOfDigitAndReverse();
int evenOdd();
float salary();
void marriageEligibility();

float circumference();
float areaofCircle();
int perimeter();
int areaofRect();

void main()
{
    int ch;
    printf("Eneter your choice : \n");
    printf("1) Temp Convert: \n");
    printf("2) Area And Perimeter: \n");
    printf("3) Sum Of Digits and Reverse: \n");
    printf("4) Even Odd : \n");
    printf("5) Salary: \n");
    printf("6) Marriage Eligibility: \n");

    scanf("%d", &ch);
    if (ch > 6 || ch <= 0)
    {
        printf("Inavalid Choice !");
    }
    else if (ch == 1)
    {
        tempConvert();
    }
    else if (ch == 2)
    {
        areaAndPerimetere();
    }
    else if (ch == 3)
    {
        sumOfDigitAndReverse();
    }
    else if (ch == 4)
    {
        if (evenOdd())
        {
            printf("Number is Even \n");
        }
```

```
        else
        {
            printf("Number is odd.");
        }
    }
    else if (ch == 5)
    {
        printf("Total Salary is : %f ", totalSalarysalary());
    }
    else if (ch == 6)
    {
        marriageEligibility();
    }
}
void tempConvert()
{
    int CL = 010;
    float fr = (9.0 / 5.0) * CL + 32;
    printf("Temparature In Celcius is :%d \n", CL);
    printf("Temparature In Feranhite is :%f", fr);
}
void areaAndPerimetere()
{
    printf("%.2f is area of Circle...! \n", areaofCircle());
    printf("\n");
    printf("%d is area of Rectangle...! \n", areaofRect());
    printf("\n");
    printf("%d is Perimeter of Rectangle..! \n", perimeter());
    printf("\n");
    printf("%.2f is Circumference of circle..! \n", circumference());
}
float areaofCircle()
{
    const float PI = 3.14;
    float radious = 9.0;
    float areaOfCir = PI * (radious * radious);
    return areaOfCir;
}
int areaofRect()
{
    int L = 15, W = 45;
    int areaOfRect = L * W;
    return areaOfRect;
}
int perimeter()
{
    int L = 15, W = 45;
    int areaOfRect = L * W;
```

```
    int periMeter = 2 * (L + W);
    return periMeter;
}
float circumference()
{
    const float PI = 3.14;
    float radious = 9.0;
    float Circumfer = 2.0 * PI * radious;
    return Circumfer;
}

void sumOfDigitAndReverse()
{
    int num = 234;
    int sum = 0;
    int rev = 0;

    int r1 = num % 10;
    int q1 = num / 10;

    sum += r1;
    rev = (rev * 10) + r1;

    r1 = q1 % 10;
    q1 /= 10;

    rev = (rev * 10) + r1;
    sum += r1;

    r1 = q1 % 10;
    q1 /= 10;

    rev = (rev * 10) + r1;
    sum += r1;

    printf("Sum of %d digits is: %d \n Also Reverse of num: %d", num, sum,
rev);
}
int evenOdd()
{
    int num = 7;
    if (num % 2 == 0)
    {
        return 1;
    }
    else
    {
        return 0;
```

```
    }
}
float salary()
{
    float baseSalary = 7777.0, totalSalary;
    float DA, TA, HRA;
    if (baseSalary <= 5000)
    {
        DA = 0.10 * baseSalary;
        TA = 0.20 * baseSalary;
        HRA = 0.25 * baseSalary;
    }
    else
    {
        DA = 0.15 * baseSalary;
        TA = 0.25 * baseSalary;
        HRA = 0.30 * baseSalary;
    }
    totalSalary = DA + TA + HRA + baseSalary;
    return totalSalary;
}
void marriageEligibility()
{
    int maleAge = 25, femaleAge = 29;
    char gender = 'f';

    if (gender == 'f' && femaleAge >= 18 || gender == 'm' && maleAge >= 21)
    {
        printf("Eligible to marry");
    }
    else
    {
        printf("Not Eligible to marry");
    }
}
```

Output:

```
PS C:\Code>  & 'c:\Users\bhagv\....\TDM-GCC-64\bin\gdb.exe' '--
interpreter=mi'

Eneter your choice :

1) Temp Convert:

2) Area And Perimeter:

3) Sum Of Digits and Reverse:

4) Even Odd :
```

```
5) Salary:
6) Marriage Eligibility:
1
Temparature In Celcius is :8
Temparature In Feranhite is :46.400002

1) Temp Convert:
2) Area And Perimeter:
3) Sum Of Digits and Reverse:
4) Even Odd :
5) Salary:
6) Marriage Eligibility:
2
Length of Rectangle: 15, Width: 45
Area of Reactangle: 675
Perimeter of Reactangle: 120

Radious of circle is: 9.000000
Circumference of that circle is: 56.520000
Area of that circle is: 254.340012

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Eneter your choice :
1) Temp Convert:
```

2) Area And Perimeter:

3) Sum Of Digits and Reverse:

4) Even Odd :

5) Salary:

6) Marriage Eligibility:

6

Eligible to marry

PS C:\Code>