Assignment No.5

Q1.Convert Ass_1 and ASS_2 program into functions with four types of function.

----------Assignment No.1----------

1.Finding F from C(temp)

-:*Type 1:-*

Code:-

```
#include<stdio.h>
void temp();
void main(){
   temp();
}
void temp(){
        int c;
   printf("Enter the tempreature in celcious :");
   scanf("%d",&c);
        int f=(c*(9/5))+32;
        printf("\n Fahrenheit = %d \n",f);
}
```

-:*Type 2:-*

Code:-

```
#include<stdio.h>
int temp();
void main(){
   printf("\n Fahrenheit = %d \n",temp());
}
int temp(){
        int c;
   printf("Enter the tempreature in celcious :");
   scanf("%d",&c);
        int f=(c*(9/5))+32;
        return f;
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>
void temp(int);
void main(){
   int c;
   printf("Enter the tempreature in celcious :");
   scanf("%d",&c);
   temp(c);

}
void temp(int c){
        int f=(c*(9/5))+32;
        printf("\n Fahrenheit = %d \n",f);
}
```

-:Type 4:-

Code:-

```
#include<stdio.h>
int temp(int);
void main(){

   int c;
   printf("Enter the tempreature in celcious :");
   scanf("%d",&c);
   printf("\n Fahrenheit = %d \n",temp(c));


}
int temp(int c){

        int f=(c*(9/5))+32;
        return f;
}
```

2. Area of rectangle and Circle

-:Type 1:-

Code:-

```
#include<stdio.h>
void perioft();
void areaoft();
void cirofc();
void areaofc();
void main(){
   int ch;
printf("What you want to find \n type 1 to find area of Triangle \n type 1 to find
area of Circle \n");
scanf("%d",&ch);
        if(ch==1){

                perioft();
                areaoft();
        }
        else{
                if(ch==2){
                cirofc();
                areaofc();
        }
        else{
                printf("Invalid choise.....\n");
        }
        }

}

void areaoft(){
        int l,b;
        printf("Enter the Length :");
        scanf("%d",&l);

                printf("Enter the Breadth :");
        scanf("%d",&b);
        if(l>0||b>0){
```

```
            int A=b*l;
        printf("Area of Rectangle = %d \n",A);
        }
    else{
        printf("Enter a Length and Bredth be a Non 0 and Possitive value ");
        }
}
void perioft(){
        int l,b;
        printf("Enter the Length :");
        scanf("%d",&l);

            printf("Enter the Breadth :");
        scanf("%d",&b);
        if(l>0||b>0){
        int P=2*(l+b);

        printf("Perimeter = %d \n",P);
        }
    else{
        printf("Enter a Length and Bredth be a Non 0 and Possitive value ");
        }
}
void areaofc(){
        int r;
        printf("Enter the radious of Circle :");
        scanf("%d",&r);
        if(r>0){
        int C=2*(22/7)*r;
        printf("Area of Circle = %d\n",C);
        }
    else{
        printf("Enter a Radious be a Non 0 and Possitive value ");
        }
}
void cirofc(){
        int r;
        printf("Enter the radious of Circle :");
```

```
        scanf("%d",&r);
        if(r>0){
                int AC=2*r*r;
        printf("Area of Circle = %d \n",AC);
        }
   else{
        printf("Enter a Radious be a Non 0 and Possitive value ");
        }
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

int perioft();
int areaoft();
int cirofc();
int areaofc();

void main(){
   int ch;

printf("What you want to find \n type 1 to find area of Triangle \n type 1 to find
area of Circle \n");
scanf("%d",&ch);
        if(ch==1){

                printf("Perimeter = %d \n",perioft());
                printf("Area of Rectangle = %d \n",areaoft());

        }
        else{
                if(ch==2){

                printf("Area of Circle = %d\n",cirofc());
                printf("Area of Circle = %d \n",areaofc());

        }
        else{
                printf("Invalid choise.....\n");
        }
```

```
        }

}

int areaoft(){
        int l,b;
        printf("Enter the Length :");
        scanf("%d",&l);

                printf("Enter the Breadth :");
        scanf("%d",&b);
        if(l>0||b>0){


                int A=b*l;
        return A;
        }
    else{
        printf("Enter a Length and Bredth be a Non 0 and Possitive value ");
        }
}
int perioft(){
        int l,b;
        printf("Enter the Length :");
        scanf("%d",&l);

                printf("Enter the Breadth :");
        scanf("%d",&b);
        if(l>0||b>0){
        int P=2*(l+b);

        return P;
        }
    else{
        printf("Enter a Length and Bredth be a Non 0 and Possitive value ");
        }
}
int areaofc(){
        int r;
        printf("Enter the radious of Circle :");
        scanf("%d",&r);
```

```
        if(r>0){
        int C=2*(22/7)*r;
        return C;
        }
    else{
        printf("Enter a Radious be a Non 0 and Possitive value ");
        }
}
int cirofc(){
        int r;
        printf("Enter the radious of Circle :");
        scanf("%d",&r);
        if(r>0){
                int AC=2*r*r;
        return AC;
        }
    else{
        printf("Enter a Radious be a Non 0 and Possitive value ");
        }
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void perioft(int,int);
void areaoft(int,int);
void cirofc(int);
void areaofc(int);

void main(){
   int ch;

printf("What you want to find \n type 1 to find area of Triangle \n type 1 to find
area of Circle \n");
scanf("%d",&ch);
        if(ch==1){
                int l,b;
        printf("Enter the Length :");
        scanf("%d",&l);
```

```
            printf("Enter the Breadth :");
        scanf("%d",&b);

            perioft(l,b);
            areaoft(l,b);
        }
        else{
            if(ch==2){
            int r;
        printf("Enter the radious of Circle :");
        scanf("%d",&r);

            cirofc(r);
            areaofc(r);
        }
        else{
            printf("Invalid choise.....\n");
        }
        }

}

void areaoft(int l,int b){
        if(l>0||b>0){
            int A=b*l;
        printf("Area of Rectangle = %d \n",A);
        }
   else{
        printf("Enter a Length and Bredth be a Non 0 and Possitive value ");
        }
}
void perioft(int l,int b){
        if(l>0||b>0){
        int P=2*(l+b);

        printf("Perimeter = %d \n",P);
        }
   else{
        printf("Enter a Length and Bredth be a Non 0 and Possitive value ");
        }
```

```
}
void areaofc(int r){
        if(r>0){
        int C=2*(22/7)*r;
        printf("Area of Circle = %d\n",C);
        }
    else{
        printf("Enter a Radious be a Non 0 and Possitive value ");
        }
}
void cirofc(int r){
        if(r>0){
                int AC=2*r*r;
        printf("Area of Circle = %d \n",AC);
        }
    else{
        printf("Enter a Radious be a Non 0 and Possitive value ");
        }
}
```

-:Type 4:-

Code:-

```
#include<stdio.h>

int perioft(int,int);
int areaoft(int,int);
int cirofc(int);
int areaofc(int);

void main(){
   int ch;

        printf("What you want to find \n type 1 to find area of Triangle \n type 1
to find area of Circle :");
        scanf("%d",&ch);
        if(ch==1){
```

```
        int l,b;
    printf("Enter the Length :");
    scanf("%d",&l);

        printf("Enter the Breadth :");
    scanf("%d",&b);
    if(l>0||b>0){

        printf("Perimeter = %d \n",perioft(l,b));

        printf("Area of Rectangle = %d \n",areaoft(l,b));
    }
else{
    printf("Enter a Length and Bredth be a Non 0 and Possitive value ");
        }

    }
    else{
        if(ch==2){


    int cirofc(){
    int r;
    printf("Enter the radious of Circle :");
    scanf("%d",&r);
    if(r>0){

        printf("Area of Circle = %d\n",cirofc(r));
        printf("Area of Circle = %d \n",areaofc(r));

    }
else{
    printf("Enter a Radious be a Non 0 and Possitive value ");
        }

    }

    }
    else{
```

```
                printf("Invalid choise.....\n");
        }
        }

}

int areaoft(int l,int b){

                int A=b*l;
        return A;

}
int perioft(int l,int b){

        int P=2*(l+b);

        return P;

}
int areaofc(int r){

        int C=2*(22/7)*r;
        return C;

}
int cirofc(int r){

                int AC=2*r*r;
        return AC;

}
```

Q3.Sum of digit and reverse num

-:Type 1:-

Code:-

```
#include<stdio.h>

void revofdigit();
void sumofdigit();
void main(){

   sumofdigit();
   revofdigit();
}
void sumofdigit(){

        int num=123;

   printf("Enter three digit number :");
   scanf("%d",&num);

        int r1=num%10;  //3
   int q1=num/10;  //12
   int r2=q1%10;  //2
   int q2=q1/10;   //1
   int r3=q2%10;

   printf("Sum of digits is : %d \n",r1+r2+r3);

}

void revofdigit(){

        int num;

   printf("Enter three digit number :");
   scanf("%d",&num);

        int r1=num%10;  //3
   int q1=num/10;  //12
```

```
   int r2=q1%10;  //2
   int q2=q1/10;   //1
   int r3=q2%10;  //1
   int a=r1*10*10;
   int b=r2*10;
   int c=r3*1;

   printf("Reverse of Digits = %d",a+b+c);
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

int revofdigit();
int sumofdigit();
void main(){
   printf("Sum of digits is : %d \n",sumofdigit());

   printf("Sum of digits is : %d \n",revofdigit());
}
int sumofdigit(){

        int num=123;

   printf("Enter three digit number :");
   scanf("%d",&num);

        int r1=num%10;  //3
   int q1=num/10;  //12
   int r2=q1%10;  //2
   int q2=q1/10;   //1
   int r3=q2%10;

   return r1+r2+r3;
}
int revofdigit(){
        int num;
   printf("Enter three digit number :");
   scanf("%d",&num);
```

```
        int r1=num%10;  //3
    int q1=num/10;  //12
    int r2=q1%10;  //2
    int q2=q1/10;   //1
    int r3=q2%10;  //1
    int a=r1*10*10;
    int b=r2*10;
    int c=r3*1;

    return a+b+c;
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void revofdigit(int);
void sumofdigit(int);
void main(){
    int num=123;

    printf("Enter three digit number :");
    scanf("%d",&num);

    sumofdigit(num);
    revofdigit(num);
}
void sumofdigit(int num){

        int r1=num%10;  //3
    int q1=num/10;  //12
    int r2=q1%10;  //2
    int q2=q1/10;   //1
    int r3=q2%10;

    printf("Sum of digits is : %d \n",r1+r2+r3);

}

void revofdigit(int num){
```

```
    int r1=num%10;  //3
    int q1=num/10;  //12
    int r2=q1%10;  //2
    int q2=q1/10;   //1
    int r3=q2%10;  //1
    int a=r1*10*10;
    int b=r2*10;
    int c=r3*1;

    printf("Reverse of Digits = %d",a+b+c);
}
```

-:Type 4:-

Code:-

```
#include<stdio.h>

int revofdigit(int);
int sumofdigit(int);
void main(){

    int num;

    printf("Enter three digit number :");
    scanf("%d",&num);

    printf("Sum of digits is : %d \n",sumofdigit(num));

    printf("Sum of digits is : %d \n",revofdigit(num));
}
int sumofdigit(int num){



    int r1=num%10;  //3
    int q1=num/10;  //12
    int r2=q1%10;  //2
    int q2=q1/10;   //1
    int r3=q2%10;

    return r1+r2+r3;
```

```
}

int revofdigit(int num){
        int r1=num%10;  //3
    int q1=num/10;  //12
    int r2=q1%10;  //2
    int q2=q1/10;   //1
    int r3=q2%10;  //1
    int a=r1*10*10;
    int b=r2*10;
    int c=r3*1;

    return a+b+c;
}
```

4.Find even odd number

-:Type 1:-

Code:-

```
#include<stdio.h>
void evenodd();
void main(){
   evenodd(num);
}
void evenodd(){
        int num;
   printf("Enter the number to Check Even or Odd :");
   scanf("%d",&num);
        if(num%2==0){
        printf("This is Even number = %d \n",num);
        }
   else{
        printf("This is Odd number = %d \n",num);
        }
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

int evenodd();
void main(){


   if(evenodd()){
        printf("This is Even number");
        }
   else{
        printf("This is Odd number\n");
        }
```

```
}
int evenodd(){

        int num;

   printf("Enter the number to Check Even or Odd :");
   scanf("%d",&num);

        if(num%2==0){
        return 1;
        }
   else{
        return 0;
        }

}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void evenodd(int);
void main(){
   int num;

   printf("Enter the number to Check Even or Odd :");
   scanf("%d",&num);

   evenodd(num);


}
void evenodd(int num){

        if(num%2==0){
        printf("This is Even number = %d \n",num);
        }
   else{
        printf("This is Odd number = %d \n",num);
        }
```

}

-:Type 4:-

Code:-

```
#include<stdio.h>

int evenodd(int);
void main(){

        int num;

    printf("Enter the number to Check Even or Odd :");
    scanf("%d",&num);


    if(evenodd(num)){
        printf("This is Even number");
        }
    else{
        printf("This is Odd number\n");
        }


}
int evenodd(int num){



        if(num%2==0){
        return 1;
        }
    else{
        return 0;
        }

}
```

5.Calculating total salary based on basic.

-:Type 1:-

Code:-

```
#include<stdio.h>
void totalsal1();
void totalsal2();
void main(){
   float bs;
   printf("Enter your Salary :");
   scanf("%f",&bs);
     if(bs<=5000){
       totalsal1();
       }
   else{
       totalsal2();
       }
}

void totalsal1(){
       float bs,da=0.15,ta=0.25,hra=0.30;
       printf("Enter your Salary :");
   scanf("%f",&bs);
       da=bs*da;
   ta=bs*ta;
   hra=bs*hra;
   float ts=bs+da+ta+hra;
       printf("Total salary is %f \n and their salary is %f \n and da is %f,\n ta
is %f,\n hra is %f ",ts,bs,da,ta,hra);
}
void totalsal2(){
       float bs,da=0.10,ta=0.20,hra=0.25;
       printf("Enter your Salary :");
   scanf("%f",&bs);

       da=bs*da;
   ta=bs*ta;
   hra=bs*hra;
   float ts=bs+da+ta+hra;
```

```
        printf("Total salary is %f \n and their salary is %f \n and da is %f,\n ta
is %f,\n hra is %f ",ts,bs,da,ta,hra);
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

void totalsal1();
void totalsal2();
void main(){
   float bs;
   printf("Enter your Salary :");
   scanf("%f",&bs);
   if(bs<=5000){

        totalsal1();
        }
   else{
        totalsal2();
        }
}

void totalsal1(){

        float bs,da=0.15,ta=0.25,hra=0.30;

        printf("Enter your Salary :");
   scanf("%f",&bs);

        da=bs*da;
   ta=bs*ta;
   hra=bs*hra;
   float ts=bs+da+ta+hra;
        printf("Total salary is %f \n and their salary is %f \n and da is %f,\n ta
is %f,\n hra is %f ",ts,bs,da,ta,hra);
}

void totalsal2(){
```

```
        float bs,da=0.10,ta=0.20,hra=0.25;

        printf("Enter your Salary :");
    scanf("%f",&bs);

        da=bs*da;
    ta=bs*ta;
    hra=bs*hra;
    float ts=bs+da+ta+hra;
        printf("Total salary is %f \n and their salary is %f \n and da is %f,\n ta
is %f,\n hra is %f ",ts,bs,da,ta,hra);
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void totalsal(float,float,float,float);
void main(){
    float bs;
    printf("Enter your Salary :");
    scanf("%f",&bs);

    if(bs<=5000){

        totalsal(bs,0.10,0.20,0.25);
        }
    else{
        totalsal(bs,0.15,0.25,0.30);
        }

}

void totalsal(float bs,float da,float ta,float hra){

        da=bs*da;
    ta=bs*ta;
    hra=bs*hra;
    float ts=bs+da+ta+hra;
```

```
        printf("Total salary is %f \n and their salary is %f \n and da is %f,\n ta
is %f,\n hra is %f ",ts,bs,da,ta,hra);
}
```

-:Type 4:-

Code:-

```
#include<stdio.h>

void totalsal1(float,float,float,float);
//void totalsal2(float,float,float,float);
void main(){
    float bs;
    printf("Enter your Salary :");
    scanf("%f",&bs);


    if(bs<=5000){

        totalsal1(bs,0.15,0.25,0.30);
        }
    else{
        totalsal1(bs,0.10,0.20,0.25);
        }
}

void totalsal1(float bs,float da,float ta,float hra){
    da=bs*da;
    ta=bs*ta;
    hra=bs*hra;
    float ts=bs+da+ta+hra;
        printf("Total salary is %f \n and their salary is %f \n and da is %f,\n ta
is %f,\n hra is %f ",ts,bs,da,ta,hra);
}
```

6. Check eligible for marry or not

-:Type 1:-

Code:-

```
#include<stdio.h>

void marrage();
void main(){
	marrage();
}
void marrage(){
		int age;
	char gender;
	printf("Enter your gender(m/f) :");
	scanf("%c",&gender);

	printf("Enter your age :");
	scanf("%d",&age);
		if(age>0 && age<120){
		if(gender=='f'&&age>=18||gender=='m'&&age>=21){
		printf("Eligible for Marry");
		}
		else{
			printf("Not Eligible for Marry");
		}}
	else{
		printf(" Enter the valid information....");
	}}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

int marrage();
void main(){

	if(marrage()){
		printf("Eligible for Marry");
```

```
		}
		else{
			printf("Not Eligible for Marry");
		}
	}
int marrage(){

	int age;
	char gender;
	printf("Enter your gender(m/f) :");
	scanf("%c",&gender);

	printf("Enter your age :");
	scanf("%d",&age);

	if(age>0 && age<120){

		if(gender=='f'&&age>=18||gender=='m'&&age>=21){
		return 1;
		}
		else{
			return 0;
		}
	}
	else{
		printf(" Enter the valid information....");
		return 0;
	}
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void marrage(char,int);
void main(){
	int age=23;
	char gender;
	printf("Enter your gender(m/f) :");
```

```
	scanf("%c",&gender);

	printf("Enter your age :");
	scanf("%d",&age);

	if(age>0&&age<120&&gender=='m'&&gender=='f'){
		marrage(gender,age);
	}
	else{
		printf(" Enter the valid information....");
	}
}
void marrage(char gender,int age){
	if(gender=='f'&&age>=18||gender=='m'&&age>=21){
		printf("Eligible for Marry");
	}
	else{
	printf("Not Eligible for Marry");
	}
}
```

-:Type 4:-

Code:-

```
#include<stdio.h>

int marrage(char,int);
void main(){

	int age;
	char gender;
	printf("Enter your gender(m/f) :");
	scanf("%c",&gender);

	printf("Enter your age :");
	scanf("%d",&age);

	if(marrage(gender,age)){
		printf("Eligible for Marry");
		}
		else{
```

```
                printf("Not Eligible for Marry");
            }
        }
int marrage(char gender,int age){
        if(age>0 && age<120){

            if(gender=='f'&&age>=18||gender=='m'&&age>=21){
            return 1;
            }
            else{
                return 0;
            }
        }
        else{
            printf(" Enter the valid information....");
            return 0;
        }
}
```

----------Assignment No.2----------

1.Find the price of item when discount is given (specify different discount based on price)

-:Type 1:-

Code:-

```
#include<stdio.h>

void discount();
void main(){
        discount();
}
void discount(){
   double dis,op,disP,pr;

   printf("Enter the Origanal Prise :");
   scanf("%2f",&op);

       if(op>=3000){
              dis= 60;
       disP=op*(dis/100);
       pr=op-disP;
       }
   else{
       if(op>=2000){
                     dis= 40;
              disP=op*(dis/100);
              pr=op-disP;}
       else{
              if(op>=1000){
                            dis= 25;
                     disP=op*(dis/100);
                     pr=op-disP;
                     }
                     else{
                     if(op>=500){
                                   dis= 15;
                            disP=op*(dis/100);
```

```
                        pr=op-disP;
                        }
                else{
                        if(op<500){
                                printf("No discount on this product. This is orignal
price ");

                                }

                        }
                }
        }
    }

    printf("Price of product = %2f rs \n and given discount is %2f = %2f rs \n
Origanal Price = %2f",pr,dis,disP,op);
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

void discount();
void main(){
    discount();
}
void discount(){
   double dis,op,disP,pr;

   printf("Enter the Origanal Prise :");
   scanf("%2f",&op);

      if(op>=3000){
            dis= 60;
      disP=op*(dis/100);
      pr=op-disP;
      }
   else{
      if(op>=2000){
```

```
                dis= 40;
            disP=op*(dis/100);
            pr=op-disP;}
        else{
            if(op>=1000){
                    dis= 25;
                disP=op*(dis/100);
                pr=op-disP;
                }
                else{
                if(op>=500){
                            dis= 15;
                    disP=op*(dis/100);
                    pr=op-disP;
                    }
                else{
                    if(op<500){
                            printf("No discount on this product. This is orignal
price ");

                            }

                    }
                }
            }
        }

        printf("Price of product = %2f rs \n and given discount is %2f = %2f rs \n
Origanal Price = %2f",pr,dis,disP,op);
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void dicprice(float,float);
void main(){
   float dis,op;
   printf("Enter the origanal price of product :");
```

```
    scanf("%f",&op);

        if(op>=3000){
                dis= 60;
                dicprice(op,dis);

        }
    else{
        if(op>=2000){
                        dis= 40;
                dicprice(op,dis);
        }
        else{
                if(op>=1000){
                                dis= 25;
                        dicprice(op,dis);
                        }
                        else{
                        if(op>=500){
                                        dis= 15;
                                dicprice(op,dis);
                                        }
                        else{
                                if(op<500){
                                        printf("Sorry! No discount on this product. ");

                                        }

                                }
                        }
                }
        }


}
void dicprice(float op,float dis){

        float disP=op*(dis/100);
    float pr=op-disP;
        printf("Price of product = %f rs \n and given discount is %f = %f rs \n
Origanal Price = %f",pr,dis,disP,op);
```

```
}
```

-:Type 4:-

Code:-

```
#include<stdio.h>

void discount(double);
void main(){

        double op;

    printf("Enter the Origanal Prise :");
    scanf("%2f",&op);
        discount(op);

}

void discount(double op){



    double dis,disP,pr;



        if(op>=3000){
                dis= 60;
        disP=op*(dis/100);
        pr=op-disP;
        }
    else{
        if(op>=2000){
                        dis= 40;
                disP=op*(dis/100);
                pr=op-disP;}
        else{
                if(op>=1000){
                                dis= 25;
                        disP=op*(dis/100);
```

```
                pr=op-disP;
                }
                else{
                if(op>=500){
                        dis= 15;
                disP=op*(dis/100);
                pr=op-disP;
                }
                else{
                if(op<500){
                        printf("No discount on this product. This is orignal
price ");

                        }

                }
                }
        }
    }

    printf("Price of product = %2f rs \n and given discount is %2f = %2f rs \n
Origanal Price = %2f",pr,dis,disP,op);
}
```

2.Write a program to find greatest of three numbers using nested if-else.

-:Type 1:-

Code:-

```
#include<stdio.h>

void greatestnum();
void main(){

        greatestnum();

}
void greatestnum(){


    int a,b,c;

    printf("Enter the Numbers :");
    scanf("%d%d%d",&a,&b,&c);


    printf("Greatest number is %d \n",(a>b)?(a>c)?a:c:(b>c)?b:c);
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>
int greatestnum();
void main(){
        printf("Greatest number is %d \n",greatestnum());
}
int greatestnum(){
    int a,b,c;
    printf("Enter the Numbers :");
    scanf("%d%d%d",&a,&b,&c);
    return (a>b)?(a>c)?a:c:(b>c)?b:c);
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void greatestnum(int,int,int);
void main(){
   int a,b,c;
    printf("Enter 3 numbers :");
    scanf("%d%d%d",&a,&b,&c);
    greatestnum(a,b,c);



}
void greatestnum(int a,int b,int c){
       printf("Greatest number is %d \n",(a>b)?(a>c)?a:c:(b>c)?b:c);
}
```

-:Type 4:-

Code:-

```
#include<stdio.h>

int greatestnum(int,int,int);
void main(){
       int a,b,c;
       printf("Enter the Numbers :");
   scanf("%d%d%d",&a,&b,&c);
       printf("Greatest number is %d \n",greatestnum());

}
int greatestnum(int a,int b,int c;){




   return (a>b)?(a>c)?a:c:(b>c)?b:c);


}
```

3.Accept two numbers from user and an operator (+,-,/, * ,%) based on that perform the desiredoperations.

-:Type 1:-

Code:-

```
#include <stdio.h>

void operation();
void main() {
   operation();
}

void operation(){

      char op ;
   int n1, n2, x;

   printf("Enter which operation you want to perform :");
   scanf("%c",&op);
   printf("Enter two numbers :");
   scanf("%d%d",&n1,&n2);


   if (op == '+') {
      x = n1 + n2;
   }
   else if (op == '-') {
      x = n1 - n2;
   }
   else if (op == '*') {
      x = n1 * n2;
   }
   else if (op == '/') {
      if (n2 != 0) {
         x = n1 / n2;
      } else {
         printf("Division by zero is not allowed.\n");
         return 1;
      }
   }
```

```
    else if (op == '%') {
        if (n2 != 0) {
            x = n1 % n2;
        } else {
            printf("Division by zero is not allowed.\n");
            return 1;
        }
    }
    else {
        printf("Invalid operator\n");
        return 1;
    }

    printf("Solution is = %d \n and given Operation is %c\n", x, op);


}
```

-:Type 2:-

Code:-

```
#include <stdio.h>

void operation();
void main() {
    operation();
}

void operation(){

        char op ;
    int n1, n2, x;

    printf("Enter which operation you want to perform :");
    scanf("%c",&op);
    printf("Enter two numbers :");
    scanf("%d%d",&n1,&n2);


    if (op == '+') {
        x = n1 + n2;
```

```
    }
    else if (op == '-') {
        x = n1 - n2;
    }
    else if (op == '*') {
        x = n1 * n2;
    }
    else if (op == '/') {
        if (n2 != 0) {
            x = n1 / n2;
        } else {
            printf("Division by zero is not allowed.\n");
            return 1;
        }
    }
    else if (op == '%') {
        if (n2 != 0) {
            x = n1 % n2;
        } else {
            printf("Division by zero is not allowed.\n");
            return 1;
        }
    }
    else {
        printf("Invalid operator\n");
        return 1;
    }

    printf("Solution is = %d \n and given Operation is %c\n", x, op);


}
```

-:Type 3:-

Code:-

```
#include <stdio.h>

void operation(int,char);
void main() {
    char op = '*';
```

```
int n1, n2, x;

printf("Enter Operator which operation you want perform :");
scanf("%c",&op);
printf("Enter Two numbrs :");
scanf("%d%d",&n1,&n2);



if (op == '+') {

     x = n1 + n2;
     operation(x,op);



}
else if (op == '-') {
    x = n1 - n2;
    operation(x,op);
}
else if (op == '*') {
    x = n1 * n2;
    operation(x,op);
}
else if (op == '/') {
    if (n2 != 0) {
        x = n1 / n2;
        operation(x,op);
    } else {
        printf("Division by zero is not allowed.\n");
        return 1;
    }
}
else if (op == '%') {
    if (n2 != 0) {
        x = n1 % n2;
        operation(x,op);
    } else {
        printf("Division by zero is not allowed.\n");
        return 1;
    }
```

```
    }
    else {
        printf("Invalid operator\n");

    }


    return 0;
}
void operation(int x,char op){

        printf("Solution is = %d \n and given Operation is %c\n", x, op);

}
```

-:Type 4:-

Code:-

```
#include <stdio.h>

int operation(char,int,int);
void main() {
        char op ;
    int n1, n2;

    printf("Enter which operation you want to perform :");
    scanf("%c",&op);
    printf("Enter two numbers :");
    scanf("%d%d",&n1,&n2);


    printf("Solution is = %d \n and given Operation is %c\n", operation(op,n1,n2),
op);
}

int operation(char op,int n1,int n2){

        //int x;


    if (op == '+') {
        return n1 + n2;
```

```
    }
    else if (op == '-') {
        return n1 - n2;
    }
    else if (op == '*') {
        return n1 * n2;
    }
    else if (op == '/') {
        if (n2 != 0) {
            return n1 / n2;
        } else {
            printf("Division by zero is not allowed.\n");

        }
    }
    else if (op == '%') {
        if (n2 != 0) {
            return n1 % n2;
        } else {
            printf("Division by zero is not allowed.\n");

        }
    }
    else {
        printf("Invalid operator\n");

    }

    //printf("Solution is = %d \n and given Operation is %c\n", x, op);


}
```

4.Display a menu to the user (like 1.Even Odd 2. Basic salary etc), ask the user to enter his choice,then based on that perform the desired operations.

-:Type 1:-

Code:-

```
#include <stdio.h>

void evenodd();
void main() {

        evenodd();

}

void evenodd(){

        int ch;

        Printf("Enter your choise(1/2)");
    scanf("%d",&ch);

    if (ch == 1) {
        int num;

       Printf("Enter the Number :");
    scanf("%d",&num);

        if(num%2==0){
                printf("This is Even number = %d \n",num);
                }
        else{
                printf("This is Odd number = %d \n",num);
                }
    }
    else if (ch==2) {
                double bs;
                double da,ta,hra,ts;

                        Printf("Enter the Salary :");
                scanf("%2f",&bs);
```

```
            if(bs<=5000){
                da=bs*0.10;
                ta=bs*0.20;
                hra=bs*0.25;
                }
            else{
                da=bs*0.15;
                ta=bs*0.25;
                hra=bs*0.30;
                }
                ts=bs+da+ta+hra;
                printf("Total salary is %2f \n and their salary is %2f \n and da
is %2f,\n ta is %2f,\n hra is %2f ",ts,bs,da,ta,hra);
        }

    else {
        printf("Wrong Choice ");

        }


}
```

-:Type 2:-

Code:-

```
#include <stdio.h>

void evenodd();
void main() {

        evenodd();

}

void evenodd(){

        int ch;

        Printf("Enter your choise(1/2)");
```

```
   scanf("%d",&ch);

   if (ch == 1) {
      int num;

      Printf("Enter the Number :");
   scanf("%d",&num);

       if(num%2==0){
              printf("This is Even number = %d \n",num);
              }
       else{
              printf("This is Odd number = %d \n",num);
              }
   }
   else if (ch==2) {
              double bs;
              double da,ta,hra,ts;

                     Printf("Enter the Salary :");
              scanf("%2f",&bs);

              if(bs<=5000){
                     da=bs*0.10;
                     ta=bs*0.20;
                     hra=bs*0.25;
                     }
              else{
                     da=bs*0.15;
                     ta=bs*0.25;
                     hra=bs*0.30;
                     }
                     ts=bs+da+ta+hra;
                     printf("Total salary is %2f \n and their salary is %2f \n and da
is %2f,\n ta is %2f,\n hra is %2f ",ts,bs,da,ta,hra);
       }

   else {
      printf("Wrong Choice ");

       }
```

```
}
```

-:Type 3:-

Code:-

```
#include <stdio.h>

void totalsal(float,float,float,float);
void evenodd(int num);
void main() {

   int ch;

   printf("What you want to do opeation \n Enter 1 for Even odd operation \n
Enter 2 for Finding Total salary...");
   scanf("%d",&ch);

   if (ch == 1) {

      int num;

      printf("Enter the number to check Even Odd:");
      scanf("%d",&num);

      evenodd(num);


   }
   else if (ch==2) {

            float bs;
            printf("Enter your Salary :");
            scanf("%f",&bs);

            if(bs<=5000){

            totalsal(bs,0.10,0.20,0.25);
                  }
            else{
                  totalsal(bs,0.15,0.25,0.30);
```

```
                }
        }
        else {
                printf("Wrong Choice ");
    }

        }


void evenodd(int num){
    if(num%2==0){
        printf("This is Even number = %d \n",num);
        }
    else{
        printf("This is Odd number = %d \n",num);
        }

}
void totalsal(float bs,float da,float ta,float hra){

    da=bs*da;
   ta=bs*ta;
   hra=bs*hra;
   float ts=bs+da+ta+hra;
    printf("Total salary is %f \n and their salary is %f \n and da is %f,\n ta
is %f,\n hra is %f ",ts,bs,da,ta,hra);
}
```

-:Type 4:-

Code:-

```
#include <stdio.h>

int evenodd(int);
double basicsal(double,double,double,double);
void main() {


    int ch;

    printf("Enter your choise(1/2)");
```

```
scanf("%d",&ch);

if (ch == 1) {
    int num;

   printf("Enter the Number :");
scanf("%d",&num);


    if(evenodd(num)==1){
            printf("This is Even number = %d \n",num);
            }
    else{
            printf("This is Odd number = %d \n",num);
            }
}
else if (ch==2) {
            double bs;


                printf("Enter the Salary :");
            scanf("%2f",&bs);

            if(bs<=5000){


                printf("Total salary is %2f",basicsal(bs,0.10,0.20,0.25));

                }
            else{


                printf("Total salary is %2f",basicsal(bs,0.15,0.25,0.30));

                }


    }

else {
    printf("Wrong Choice ");
```

```
        }



}

int evenodd(int num){


        if(num%2==0){
                return 1;
                }
        else{
                return 0;
                }
  }
double basicsal(double bs,double da,double ta,double hra){


                        da=bs*0.10;
                        ta=bs*0.20;
                        hra=bs*0.25;


                        printf("their salary is %2f \n and da is %2f,\n ta is %2f,\n hra
is %2f ",bs,da,ta,hra);
        return bs+da+ta+hra;
}
```

5.Accept the price from user. Ask the user if he is a student (user may say yes
or no). If he is a student and he has purchased more than 500 than discount
is 20% otherwise discount is 10%.But if he is not a student then if he has
purchased more than 600 discount is 15% otherwise there is not discount

-:Type 1:-

Code:-

```
#include <stdio.h>

void xyz();
int main() {


      xyz();
    char op;
    int pr,fp;

    Printf("Enter s if you are student :");
    scanf("%c",&op);
    Printf("Enter price of product :");
    scanf("%d",&pr);

    float dis;

    if (op == 's') {
        if (pr>500) {
         dis = 0.20;
                }
         else{
         dis = 0.10;
         }
         }
    else{
        if (pr>600) {
         dis = 0.15;
                }
         else{
```

```
        printf("No discount");
        }
    }


        fp=pr-(pr*dis);

    printf("Total Price = %d \n and given discount is %f \n So final price is :",
pr,dis);
    (dis>0)?printf("%d",fp):printf("%d",pr);
    return 0;
}

void xyz(){
        char op;
    int pr,fp;
    float dis;

    printf("Enter s if your student");
    scanf("%c",&op);

    printf("Enter the Price :");
    scanf("%d",&pr);

    if (op == 's') {
        if (pr>500) {
         dis = 0.20;
                }
         else{
         dis = 0.10;
         }
         }
    else{
        if (pr>600) {
         dis = 0.15;
                }
         else{
         printf("No discount");
         }
    }
```

```
        fp=pr-(pr*dis);

    printf("Total Price = %d \n and given discount is %f \n So final price is :",
pr,dis);
    (dis>0)?printf("%d",fp):printf("%d",pr);
}
```

-:Type 2:-

Code:-

```
#include <stdio.h>

void xyz();
int main() {


        xyz();
    char op;
    int pr,fp;

    Printf("Enter s if you are student :");
    scanf("%c",&op);
    Printf("Enter price of product :");
    scanf("%d",&pr);

    float dis;

    if (op == 's') {
        if (pr>500) {
         dis = 0.20;
                }
         else{
         dis = 0.10;
         }
         }
    else{
        if (pr>600) {
         dis = 0.15;
                }
         else{
```

```
        printf("No discount");
        }
    }


        fp=pr-(pr*dis);

    printf("Total Price = %d \n and given discount is %f \n So final price is :",
pr,dis);
    (dis>0)?printf("%d",fp):printf("%d",pr);
    return 0;
}

void xyz(){
        char op;
    int pr,fp;
    float dis;

    printf("Enter s if your student");
    scanf("%c",&op);

    printf("Enter the Price :");
    scanf("%d",&pr);

    if (op == 's') {
        if (pr>500) {
         dis = 0.20;
                }
         else{
         dis = 0.10;
         }
         }
    else{
        if (pr>600) {
         dis = 0.15;
                }
         else{
         printf("No discount");
         }
    }
```

```
        fp=pr-(pr*dis);

    printf("Total Price = %d \n and given discount is %f \n So final price is :",
pr,dis);
    (dis>0)?printf("%d",fp):printf("%d",pr);
}
```

-:Type 3:-

Code:-

```
#include <stdio.h>

void disprise(float pr,float dis);
int main() {
    char op = 's';
    float pr;
    float dis;
    printf("Who are you \n Enter s for student if you are student...");
    scanf("%c",&op);

        printf("Enter your total amount :");
    scanf("%f",&pr);

    if (op == 's') {
        if (pr>500) {

        dis = 0.2;
        disprise(pr,dis);

                }
        else{
        dis = 0.1;
        disprise(pr,dis);
        }
        }
    else{
        if (pr>600) {
        dis = 0.15;
        disprise(pr,dis);
                }
```

```
        else{
        printf("No discount");
        }
    }



}

void disprise(float pr,float dis){

        float fp=pr-(pr*dis);

    printf("Total Price = %f \n and given discount is %f %%\n So final price is :",
pr,dis);
    (dis>0)?printf("%f",fp):printf("%f",pr);
}
```

-:Type 4:-

Code:-

```
#include <stdio.h>

int xyz(int,float);
int main() {

                char op;
    int pr,fp;


    printf("Enter s if your student :");
    scanf("%c",&op);

    printf("Enter the Price :");
    scanf("%d",&pr);

    if (op == 's') {
        if (pr>500) {
        (0.20>0)?printf("%d",xyz(pr,0.20)):printf("%d",pr);
                }
        else{
```

```
        (0.10>0)?printf("%d",xyz(pr,0.10)):printf("%d",pr);
        }
        }
    else{
       if (pr>600) {
        (0.15>0)?printf("%d",xyz(pr,0.15)):printf("%d",pr);

                }
        else{
        printf("No discount");
        }
    }



}

int xyz(int pr,float dis){




    printf("Total Price = %d \n and given discount is %f \n So final price is :",
pr,dis);
    return pr-(pr*dis);
}
```

Q2.Convert Ass_3 program into functions with four types of function.(Excluding range programs) . convert range programs into two type of function i.e. w/o parameter, w/o return type and with parameter and w/o return type.

----------Assignment No.3----------

1. Print numbers from 1 to 10

-:Type 1:-

Code:-

```
#include<stdio.h>

void number();
void main(){
	number();

}
void number(){
	int a=1;
	while(a<=10){
		printf("%d \n",a);
		a++;
	}
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void number(int);
void main(){
	int a=1;
	number(a);

}
```

```
void number(int a){

	while(a<=10){
		printf("%d \n",a);
		a++;
	}
}
```

2.Print table for the given number.

-:Type 1:-

Code:-

```
#include<stdio.h>

void table();
void main(){
	table();
}
void table(){

	int t,a=1;
	while(a<=10){
		t=2*a;
		printf("2*%d=%d \n",a,t);
		a++;
	}

}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void table(int);
void main(){
	int a=1;
```

```
	table(a);
}
void table(int a){

	int t;
	while(a<=10){
		t=2*a;
		printf("2*%d=%d \n",a,t);
		a++;
	}
}
```

3.Calculate sum of numbers in the given range.

-:Type 1:-

Code:-

```
#include<stdio.h>

void sumofdigit();
void main(){

	sumofdigit();
}

void sumofdigit(){

	int num,r,sum=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	while(num!=0){
		r=num%10;
		sum=sum+r;
		num=num/10;

	}
	printf("Sum of digit is :%d",sum);
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

void sumofdigit(int,int);
void main(){

	int num,sum=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	sumofdigit(num,sum);
}

void sumofdigit(int num,int sum){

	int r;

	while(num!=0){
		r=num%10;
		sum=sum+r;
		num=num/10;

	}
	printf("Sum of digit is :%d",sum);
}
```

4.Check number is prime or not

-:Type 1:-

Code:-

```
#include<stdio.h>
void main(){

	primenum();


}
primenum(){
	int num,a=2,check=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	while(a!=num){
		if(num%a==0){
			check=1;
```

```
		}
		a++;

	}
	if(check!=1){
		printf("Number is prime");

	}
	else{
		printf("Number is Non-prime");
	}
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>
void primenum(int,int,int);
void main(){
	int num,a=2,check=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	primenum(num,a,check);


}
void primenum(int num,int a,int check){


	while(a!=num){
		if(num%a==0){
			check=1;

		}
		a++;

	}
	if(check!=1){
		printf("Number is prime");

	}
```

```
	else{
		printf("Number is Non-prime");
	}
}
```

5.Check number is Armstrong or not

-:Type 1:-

Code:-

```
#include<stdio.h>

void armstrong();
void main(){

	armstrong();

}
void armstrong(){
	int num,r,sum=0,r1;
	printf("Enter the Number :");
	scanf("%d",&num);
	int t=0,no=num,a;
	int check=num;
	while(no!=0){
		t++;
		no=no/10;

	}
	while(num!=0){
		r=num%10;
		r1=r;
		a=t;
		while(t>1){
			r=r*r1;
			//printf("%d \n",r);
			t--;
		}
		t=a;
		sum=sum+r;
```

```
        num=num/10;
        //printf("sum= %d \n",sum);
    }
    (sum==check)?printf("Number is Armstrong Number"):printf("Number is
Not Armstrong Number");


}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void armstrong(int,int);
void main(){
    int num,sum=0;
    printf("Enter the Number :");
    scanf("%d",&num);
    armstrong(num,sum);

}
void armstrong(int num,int sum){
    int r,r1;

    int t=0,no=num,a;
    int check=num;
    while(no!=0){
        t++;
        no=no/10;

    }
    while(num!=0){
        r=num%10;
        r1=r;
        a=t;
        while(t>1){
            r=r*r1;
            //printf("%d \n",r);
            t--;
        }
        t=a;
```

```
        sum=sum+r;
        num=num/10;
        //printf("sum= %d \n",sum);
    }
    (sum==check)?printf("Number is Armstrong Number"):printf("Number is
Not Armstrong Number");


}
```

6.Check number is perfect or not.

-:Type 1:-

Code:-

```
#include<stdio.h>

void perfectnum();
void main(){

    perfectnum();

}
void perfectnum(){


    int num,r=1,sum=0;
    printf("Enter the Number :");
    scanf("%d",&num);
    int check=num;

    while(r!=num);{

        if(num%r==0){
            sum=sum+r;
        }
    r++;
    }
    (sum==check)?printf("Number is Perfect Number"):printf("Number is Not
Perfect Number");

}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

void perfectnum(int,int,int);
void main(){

	int num,r=1,sum=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	perfectnum(num,r,sum);

}
void perfectnum(int num,int r,int sum){



	int check=num;

	while(r!=num);{

		if(num%r==0){
			sum=sum+r;
		}
	r++;
	}
	(sum==check)?printf("Number is Perfect Number"):printf("Number is Not
Perfect Number");

}
```

7.Find factorial of number.

-:Type 1:-

Code:-

```
#include<stdio.h>
```

```
void factnum();
void main(){

	factnum();
}
void factnum(){

		int a=5,b=0,sum=1;
	while(a!=b){
		//printf("%d \n",a);
		sum=sum*a;
		a--;
	}
	printf("Factorial if given numbr is : %d \n",sum);

}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

void factnum(int,int,int);
void main(){

	int a=5,b=0,sum=1;

	factnum(a,b,sum);
}
void factnum(int a,int b,int sum){


	while(a!=b){
		//printf("%d \n",a);
		sum=sum*a;
		a--;
	}
	printf("Factorial if given numbr is : %d \n",sum);
```

```
}
```

8. Check number is strong or not.

-:Type 1:-

Code:-

```
#include<stdio.h>

void strongnum();
void main(){

	strongnum();


}

void strongnum(){
	int num,r,a,b=0,fact,str=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	while(num!=0){
		fact=1;
		r=num%10;
		a=r;
		while(a!=b){
			fact=fact*a;
			a--;
		}
		str=str+fact;
		num=num/10;
	}
	printf("Strong of given numbr is : %d \n",str);
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>
```

```
void strongnum(int,int,int);
void main(){
	int num,b=0,str=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	strongnum(num,b,str);


}

void strongnum(int num,int b,int str){
	int ,r,a,fact;
	while(num!=0){
		fact=1;
		r=num%10;
		a=r;
		while(a!=b){
			fact=fact*a;
			a--;
		}
		str=str+fact;
		num=num/10;
	}
	printf("Strong of given numbr is : %d \n",str);
}
```

9. Check the given number is palindrome or not?

-:Type 1:-

Code:-

```
#include<stdio.h>

void palinnum();
void main(){
	palinnum();
```

```
}

void palinnum(){
	int num,r,a,rev=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	int check=num;
	while(num!=0){
		a=num;
		r=num%10;
		while(a!=1){
			r=r*10;
			a=a/10;
		}
		rev=rev+r;
		num=num/10;

	}
	(rev==check)?printf("Number is palindrome Number"):printf("Number is
Not palindrome Number");

}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

void palinnum(int,int);
void main(){
	int num,rev=0;
	palinnum(num,rev);


}

void palinnum(int num,int rev){
	int r,a,rev=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	int check=num;
```

```
    while(num!=0){
        a=num;
        r=num%10;
        while(a!=1){
            r=r*10;
            a=a/10;
        }
        rev=rev+r;
        num=num/10;

    }
    (rev==check)?printf("Number is palindrome Number"):printf("Number is
Not palindrome Number");

}
```

10.Add the (first and last) digit of a given number?

-:Type 1:-

Code:-

```
#include<stdio.h>

void sumoffirst();
void main(){
    sumoffirst();

}
void sumoffirst(){


    int num,sum=0;
    printf("Enter the Number :");
    scanf("%d",&num);
    int fd=num%10;
    while(num>9){
        num=num/10;

    }
    sum=fd+num;
```

```
	printf("Sum of first and last digit is : %d",sum);
}
```

-:Type 2:-

Code:-

```
#include<stdio.h>

void sumoffirst(int,int);
void main(){
	int num,sum=0;
	printf("Enter the Number :");
	scanf("%d",&num);
	sumoffirst(num,sum);

}
void sumoffirst(int num,int sum){

	int fd=num%10;
	while(num>9){
		num=num/10;

	}
	sum=fd+num;

	printf("Sum of first and last digit is : %d",sum);
}
```

Q3.Convert Ass_4 into two type of function i.e. w/o parameter, w/o return type and with parameter and w/o return type

----------Assignment No.4----------

1. Print armstrong number in the the given range 1 to n?

-:Type 1:-

Code:-

```
//Print armstrong number in the the given range 1 to n?
#include<stdio.h>

void armstrong();
int main(){

	armstrong();



}

void armstrong(){

	int rem,r1,num1,num2;
	int digit,t,count;
	int sum=0,num;

	printf("Enter two numbers :");
	scanf("%d%d",&num1,&num2);

	num=num1;

	for(;num<=num2;num++){  //sequencely flow number

		//printf("%d",num);
		num1=num;
		digit=1;

		for(;num1>9;num1=num1/10){  //use for finding how many digit in number
```

```
                digit++;
                //printf("no of digit : %d \n",digit);
        }

                num1=num;
                count=digit;

                for(;digit>0;digit--){
                        t=count;
                        rem=num1%10;                    //finding reminder
                        //      printf("reminder is %d \n",rem);


                        r1=rem;

                        for(;t>1;t--){                                  //to calculate power
of n(digit number) reminder
                                rem=r1*rem;
                                //      printf("reminder is %d \n",rem);
                                }
                        sum=sum+rem;
                        num1=num1/10;
                }
        if(sum == num){

                printf(" %d is the armstrong number which \n",num);

                printf("sum is %d \n",sum);

                //num1=num;
        }
        sum=0;
    }
}
```

-:Type 3:-

Code:-

```
//Print armstrong number in the the given range 1 to n?
#include<stdio.h>

void armstrong(int,int);
```

```
int main(){



	int num1,num2;

	printf("Enter two numbers :");
	scanf("%d%d",&num1,&num2);
	armstrong(num1,num2);


}

void armstrong(int num1,int num2){

	int rem,r1;
	int digit,t,count;
	int sum=0,num;


	num=num1;

	for(;num<=num2;num++){  //sequencely flow number

		//printf("%d",num);
		num1=num;
		digit=1;

		for(;num1>9;num1=num1/10){  //use for finding how many digit in
number
			digit++;
			//printf("no of digit : %d \n",digit);
		}

			num1=num;
			count=digit;

			for(;digit>0;digit--){
				t=count;
				rem=num1%10;		//finding reminder
				//	printf("reminder is %d \n",rem);
```

```
                        r1=rem;

                        for(;t>1;t--){                          //to calculate power
of n(digit number) reminder
                                rem=r1*rem;
                                //      printf("reminder is %d \n",rem);
                                }
                        sum=sum+rem;
                        num1=num1/10;
                }
        if(sum == num){

                printf(" %d is the armstrong number which ",num);

                printf("sum is %d \n",sum);

                //num1=num;
        }
        sum=0;
    }
}
```

2. Print prime number in the given range 1 to n?

-:Type 1:-

Code:-

```
#include<stdio.h>

void primenum();
void main(){

    primenum();


}
```

```
void primenum(){

	int n1,n2;
	printf("Enter two numbers :");
	scanf("%d%d",&n1,&n2);
	for(;n1<=n2;n1++){
		//printf("%d",n1);
		if(n1<=7){

		if(n1==2||n1==3||n1==5||n1==7){
			printf("%d \n",n1);
		}

		}
		else{
		if(n1%2==0||n1%3==0||n1%5==0||n1%7==0){
			//printf("%d",n1);
		}
		else{
			printf("%d \n",n1);

		}

		}
	}
}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void primenum(int,int);
void main(){

	int n1,n2;
	printf("Enter two numbers :");
	scanf("%d%d",&n1,&n2);
	primenum(n1,n2);


}
```

```
void primenum(int n1,int n2){
	printf("The given range prime number is :\n");

	for(;n1<=n2;n1++){
		//printf("%d",n1);
		if(n1<=7){

		if(n1==2||n1==3||n1==5||n1==7){
			printf("%d \n",n1);
		}

		}
		else{
		if(n1%2==0||n1%3==0||n1%5==0||n1%7==0){
			//printf("%d",n1);
		}
		else{
			printf("%d \n",n1);

		}

		}
	}
}
```

3. check perfect number in the given range 1 to n?

-:Type 1:-

Code:-

```
#include<stdio.h>

void perfectnum();
void main(){

	perfectnum();


}

void perfectnum(){
```

```
	int num1,num2,count,sum;

	printf("Enter two numbers :");
	scanf("%d%d",&num1,&num2);

	for(;num1<=num2;num1++){
		sum=0;
		//printf("number is %d \n",num1);
		//printf(" sum is %d \n",sum);
		count=1;
		for(;num1>count;count++){
			if(num1%count==0){

				//printf("count is %d \n",count);
				sum=sum+count;
				//printf("sum is %d \n",sum);
			}
			//printf("sum is %d \n",sum);
		}
		if(sum==num1){

					printf("perfect num is %d ",num1);
					printf("their sum is %d \n",sum);
	}
	}

}
```

-:Type 3:-

Code:-

```
#include<stdio.h>

void perfectnum(int,int);
void main(){

	int num1,num2;
	printf("Enter two numbers :");
	scanf("%d%d",&num1,&num2);
```

```
	perfectnum(int num1,int num2);


}

void perfectnum(num1,num2){

	int num1,num2,count,sum;



	for(;num1<=num2;num1++){
		sum=0;
		//printf("number is %d \n",num1);
		//printf(" sum is %d \n",sum);
		count=1;
		for(;num1>count;count++){
			if(num1%count==0){

				//printf("count is %d \n",count);
				sum=sum+count;
				//printf("sum is %d \n",sum);
			}
			//printf("sum is %d \n",sum);
		}
		if(sum==num1){

					printf("perfect num is %d ",num1);
					printf("their sum is %d \n",sum);
	}
	}

}
```

4. check strong number in the given range 1 to n?

-:Type 1:-

Code:-

```
//check strong number in the given range 1 to n
#include<stdio.h>

void strongnum();
void main(){

	strongnum();


}

void strongnum(){
	int num1,num2,no,rem,r1,b=0,fact,str=0;

	printf("Enter two number :");
	scanf("%d%d",&num1,&num2);


	for(;num1<=num2;num1++){

	no=num1;

		for(;num1!=0;num1=num1/10){

			fact=1;
			rem=num1%10;
			r1=rem;

			for(;r1!=b;r1--){
				fact=fact*r1;

			}

			str=str+fact;


		}

		if(str==no){
		printf("Strong of %d numbr is : %d \n",no,str);
		}
```

```
            num1=no;
            b=0;
            str=0;
        }
}
```

-:Type 3:-

Code:-

```
//check strong number in the given range 1 to n
#include<stdio.h>

void strongnum(int,int);
void main(){
        int num1,num2;
        printf("Enter two number :");
        scanf("%d%d",&num1,&num2);
        strongnum(num1,num2);


}

void strongnum(int num1,int num2){
        int no,rem,r1,b=0,fact,str=0;




        for(;num1<=num2;num1++){

        no=num1;

                for(;num1!=0;num1=num1/10){

                        fact=1;
                        rem=num1%10;
                        r1=rem;
```

```
                for(;r1!=b;r1--){
                        fact=fact*r1;

                }

                str=str+fact;


        }

        if(str==no){
        printf("Strong of %d numbr is : %d \n",no,str);
        }
        num1=no;
        b=0;
        str=0;
    }
}
```

5. Print fibonacci series?(optional)

-:Type 1:-

Code:-

```
//Print fibonacci series?(optional)

#include<stdio.h>


void fibonaccinum();
void main(){

    fibonaccinum();


}
```

```
void fibonaccinum(){

	int num,prv=0,post=1,count,temp;
	printf("How many number you want to print :");
	scanf("%d",&num);
	//printf(" 0 \n");
	for(count=1;count<=num;count++)
	{
		temp=prv;
		prv=post;
		post=temp;
		printf(" %d \n",post);
		post=prv+post;

}
}
```

-:Type 3:-

Code:-

```
//Print fibonacci series?(optional)

#include<stdio.h>


void fibonaccinum(int);
void main(){
	int num;
	printf("How many number you want to print :");
	scanf("%d",&num);

	fibonaccinum(num);


}

void fibonaccinum(int num){

	int prv=0,post=1,count,temp;

	//printf(" 0 \n");
	for(count=1;count<=num;count++)
```

```
        {
                temp=prv;
                prv=post;
                post=temp;
                printf(" %d \n",post);
                post=prv+post;

}
}
```