

Assignment No.6

Q1. Do all type 3(with parameter without return type) Function program using Pointer.

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

1.Finding F from C(temp)

-:Type 3:-

Code:-

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

2. Area of rectangle and Circle

-: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 Radius 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 Radius be a Non 0 and Possitive value ");
    }
}
}

```

Q3.Sum of digit and reverse num

-: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);
}

```

4.Find even odd number

-: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));
```

```
    }
```

```
}
```

5.Calculating total salary based on basic.

-: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);
```

```
}
```

6. Check eligible for marry or not

-: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){
        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");
    }
}
```

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

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

:-Type 3:-

Code:-

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

```
void dicprice(float*,float*);
```

```
void main(){
```

```
    float dis,op;
```

```
    printf("Enter the original 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
Original Price = %f",pr,(*dis),disP,(*op));

}

```

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

-: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));
}

```

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

-: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);

}

```

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 3:-

Code:-

```

#include <stdio.h>
void totalsal(float*,float,float,float);
void evenodd(int*);
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);
}

```

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 3:-

Code:-

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

```

void disprise(float*,float*);
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));
}

```

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

1. Print numbers from 1 to 10

-: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 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 3:-

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 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 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.

```
#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 3:-

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 3:-

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 3:-

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 3:-

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);
}
```

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

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

-: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 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 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 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 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;
```

```
    }
```

```
}
```