Type 3 Function With Pointer

1. Finding F from C (temp).

```
#include<stdio.h>
void findingf(float*);
void main()
{
float c,f;
printf("\t\tEnter the Celsius: ");
scanf("%f",&c);
findingf(&c);
}
void findingf(float* c )
{
float f ;
f = (*c*9)/5+32;
printf("\t\tTemperature in Fahrenheit is : %f\n",f);
}
```

2. Finding area and perimeter of rectangle or circle.

```
#include<stdio.h>
void rectangle(int* ,int* );
void circle(int*);
void main()
{
int a;
printf("Finding area and perimeter : \n 1 Rectangle \n 2 Cricle \n choose any one ");
scanf("%d",&a);
if(a==1)
{
int l;
int w;
int area;
int p;
printf("Enter the length of rectangle : ");
scanf("%d",&l);
printf("Enter the width of the rectangle: ");
scanf("%d",&w);
rectangle(&l,&w);
}else{
if(a==2){
```

```
int r ;
int area ;
int perimeter ;
int pai = 22/7;
printf("enter the radius of circle : ");
scanf("%d",&r);
circle(&r);
}
else {
printf("!!!!invalid option!!!!\n");
}
}
}
```

```
void rectangle(int* l,int* w)
{
int area;
int p;
area = *l  *  *w ;
printf("Area of rectangle is : %d",area);
printf("\n");
p = 2 * ( *l +  *w ) ;
printf("perimeter of rectangle is : %d ",p);
printf("\n");
}
void circle(int* r )
{ int area ,
perimeter;
int pai = 22/7;
area = pai * (*r  *   *r);
printf("area of circle is : %d",area);
printf("\n");
perimeter = 2 * pai *  *r ;
printf("Perimeter of circle is : %d",perimeter);
printf("\n");
}
```

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

```
#include<stdio.h>
void reverse(int*);
void sumofdigit(int*);
```

```
void both();
void main()
{
int a;
int num;
int r ;
int sum;
int nu ;
printf("choose any one\n 1 sum of digit \n 2 reverse the number \n 3 refresh \ntypehere: " );
scanf("%d",&a);
if(a==1){
printf("enter the number here:");
scanf("%d",&num);
sumofdigit(&num);
}else{
if(a==2){
printf("Enetr the number is here : ");
scanf("%d",&nu);
reverse(&nu);
}else{
if(a==3){
main();
}else{
printf("invalid input \n");
}
}
}
}
void sumofdigit(int* num)
{
int sum;
int r ;
for(sum=0;r = *num %10; *num= *num/10)
{
sum = sum + r;
}
printf("sum of digit is : %d \n", sum);
}
void reverse(int* nu)
{ int re ;
int r ;
for(re=0;r= *nu%10; *nu = *nu/10)
```

```
{
re = re *10 + r;
}
printf("the reverse value is : %d\n",re);
}
```

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

```
#include<stdio.h>
void evenodd(int*);
void main()
{
int num;
printf("enter the number here : ");
scanf("%d",&num);
evenodd(&num);
}
void evenodd(int* num)
{
if(*num%2==0){
printf("its even number : %d", *num);
}
else{
printf("its odd number : %d", *num);
}
}
```

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.

```
#include<stdio.h>
void less(int*);
void other(int*);
void main()
{
int salary;
int da,ta,hra;
int total;
printf("Enter the salary : ");
scanf("%d",&salary);
if(salary<=5000 )
{
less(&salary);
}
else{
other(&salary);
```

```
}
}

void less(int* salary)
{
int da,ta,hra;
int total;
da = *salary * 10/100;
ta = *salary * 15/100;
hra = *salary *25/100;
total = *salary + da + ta + hra;
printf("you get 10 and 20 and 25 percent on Ta,Da and Hra\n");
printf("total salary on basic is : %d",total);
printf("\n");
}

void other(int* salary)
{
int da,ta,hra;
int total;
da = *salary * 15/100;
ta = *salary * 25/100;
hra = *salary * 30/100;
total = *salary + da + ta + hra;
printf("you get 15 and 25 and 30 percent on Ta,Da and Hra \n");
printf("total salary on basic is : %d",total);
printf("\n");
}
```

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

```
#include<stdio.h>
void fivep(int*);
void tenp(int*);
void main()
{
int price;
int five;
int total;
int tend;
printf("Get discount on price ");
printf("Enter the price : ");
scanf("%d",&price);
```

```
if(price<500)
{
fivep(&price);
}
else
{
tenp(&price);
}
}
void fivep(int* price)
{
int five;
int total;
int tend;
five = *price * 0.05;
total = *price - five;
printf(" you get 5 Percent discount ");
printf("now price is %d",total);
printf("\n");
}
void tenp(int* price )
{
int five;
int total;
int tend;
tend = *price * 0.10;
total = *price - tend;
printf(" you get 10 Percent discount ");
printf("now price is %d",total);
printf("\n");
}
```

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

```
#include<stdio.h>
void findbig(int*,int*,int*);
void main()
{
int a,b,c;
printf("\tEnter the three number here :\n");
printf("\tEnter the First number A: ");
scanf("%d",&a);
printf("\tEnter the second number B: ");
scanf("%d",&b);
```

```
printf("\tEnter the third number C: ");
scanf("%d",&c);
findbig(&a,&b,&c);
}
void findbig(int* a, int* b, int* c)
{
printf("*****************************************\n");
if (*a>*b && *a>*c){
printf("\tA is max ");
printf("value is : %d \n",*a);
}else{
if (*b>*c && *b>*a){
printf("\tB is max ");
printf("value is : %d \n",*b);
}else{
if (*c>*b && *c>*a)
printf("\tC is max ");
printf("value is : %d \n",*c);
}
}
printf("*****************************************\n");
}
```

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

```
#include<stdio.h>
void add(int*,int*);
void sub(int*,int*);
void mult(int*,int*);
void divi(int*,int*);
void Rem(int*);
void main()
{
int a;
int num1,num2;
printf("\t**********Menu**********:\n");
printf("\n\t 1 Addition \n\t 2 Substraction \n\t 3 Multiplication \n\t 4 Division \n\t 5 remender \n
Choose any one : ");
scanf("%d",&a);
printf("Enter the two number here :\n");
printf("Enter the First number: ");
scanf("%d",&num1);
```

```
printf("Enter the Second Number : ");
scanf("%d",&num2);
if(a==1){
add(&num1,&num2);
}else{if(a==2)
{
sub(&num1,&num2);
}else{if(a==3)
{
mult(&num1,&num2);
}else{
if(a==4){
divi(&num1,&num2);
}else{
if(a==5){
Rem(&num1);
}else
{
printf("invalid\n");
}
}
}
}
}
}
void add(int* num1,int* num2)
{
int total;
total = *num1 + *num2 ;
printf( "Addtion is : %d \n",total);
}
void sub(int* num1,int* num2)
{
int total;
total = *num1 - *num2 ;
printf( "Substration is : %d \n",total);
}
void mult(int* num1,int* num2)
{
int total;
total = *num1  *  *num2;
printf( "Multiplication is : %d \n",total);
```

```
}
void divi(int* num1,int* num2)
{
int total;
total = *num1 / *num2 ;
printf( "Division is : %d \n",total);
}
void Rem(int* num1)
{
int total;
total = *num1 % 10 ;
printf( "Division is : %d \n",total);
}
```

9. 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.

```
#include<stdio.h>
void evenodd(int*);
void calcu();
void cel(float*);
void findbig(int*,int*,int*);
void add(int*,int*);
void sub(int*,int*);
void mult(int*,int*);
void divi(int*,int*);
void Rem(int*);
void main()
{
int a;
printf("\t**********Menu**********:\n");
printf("\n\t 1 Even or odd \n\t 2 +-*/ \n\t 3 find cel \n\t 4 find big number \n Choose any one : ");
scanf("%d",&a);
if(a==1){
int num;
printf("enter the number here : ");
scanf("%d",&num);
evenodd(&num);
}else{
if(a==2){
calcu();
}else{
if(a==3){
```

```
float c,f;
printf("\t\tEnter the Celsius: ");
scanf("%f",&c);
cel(&c);
}else{
if(a==4){
int a,b,c;
printf("\tEnter the three number here :\n");
printf("\tEnter the First number A: ");
scanf("%d",&a);
printf("\tEnter the second number B: ");
scanf("%d",&b);
printf("\tEnter the third number C: ");
scanf("%d",&c);
findbig(&a,&b,&c);
}else{
printf("invalid \n");
}
}
}
}
}

void evenodd(int* num)
{
if(*num%2==0){
printf("its even number : %d", *num);
}
else{
printf("its odd number : %d", *num);
}
}
void calcu()
{
int a;
int num1,num2;
printf("\t**********Menu**********:\n");
printf("\n\t 1 Addition \n\t 2 Substraction \n\t 3 Multiplication \n\t 4 Division \n\t 5 remender \n
Choose any one : ");
scanf("%d",&a);
printf("Enter the two number here :\n");
printf("Enter the First number: ");
```

```
scanf("%d",&num1);
printf("Enter the Second Number : ");
scanf("%d",&num2);
if(a==1){
add(&num1,&num2);
}else{if(a==2)
{
sub(&num1,&num2);
}else{if(a==3)
{
mult(&num1,&num2);
}else{
if(a==4){
divi(&num1,&num2);
}else{
if(a==5){
Rem(&num1);
}else
{
printf("invalid\n");
}
}
}
}
}
printf("\t********Thank you **********\n");
}

void cel(float* c )
{
float f ;
f = (*c*9)/5+32;
printf("\t\tTemperature in Fahrenheit is : %f\n",f);
}
void findbig(int* a, int* b, int* c)
{
printf("*****************************************\n");
if (*a>*b && *a>*c){
printf("\tA is max ");
printf("value is : %d \n",*a);
}else{
if (*b>*c && *b>*a){
```

```
printf("\tB is max ");
printf("value is : %d \n",*b);
}else{
if (*c>*b && *c>*a)
printf("\tC is max ");
printf("value is : %d \n",*c);
}
}
printf("*****************************************\n");
}
void add(int* num1,int* num2)
{
int total;
total = *num1 + *num2 ;
printf( "Addtion is : %d \n",total);
}
void sub(int* num1,int* num2)
{
int total;
total = num1 - num2 ;
printf( "Substration is : %d \n",total);
}
void mult(int* num1,int* num2)
{
int total;
total = *num1 *  *num2;
printf( "Multiplication is : %d \n",total);
}
void divi(int* num1,int* num2)
{
int total;
total = *num1 /  *num2 ;
printf( "Division is : %d \n",total);
}
void Rem(int* num1)
{
int total;
total = *num1 % 10 ;
printf( "Division is : %d \n",total);
}
```

10. 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.

```
#include<stdio.h>
void nonstud(int*);
void stud(int*);
void main()
{
int v;
int price;
int final,total;
printf( "you are studnet ( yes(1) or no(2) ):");
scanf ("%d",&v);
if(v == 1)
{
printf ("you are student so u will get discount \n");
printf("enter the price here :");
scanf("%d",&price);
stud(&price);
}else{
if(v == 2){
printf ("you are non-student so u will get discount \n");
printf("enter the price here :");
scanf("%d",&price);
nonstud(&price);
} else{
printf("invalid option \n");
}}
}
void stud(int* price)
{
int final,total;
if(*price>500)
{
final = *price * 0.2;
total = *price -final;
printf(" you are student and you get 20Percent off bcz price is more than 500 \n");
printf("price is : %d\n",total);
}else
{
final = *price * 0.1;
total = *price -final;
```

```
printf(" you are student and you get 10 Percent off bcz of price is less than 500 \n");
printf("price is : %d\n",total);
}
}
void nonstud(int* price)
{
int final,total;
if(*price>600)
{
final = *price * 0.15;
total = *price -final;
printf("price is more the 600 so u get 15 Percent discount \n");
printf("price is : %d\n",total);
}else
{
printf("Sorry u are not valid for discount\n");
printf("price is : %d\n", *price);
}
}
```

11. Find the factorial of any number

```
#include<stdio.h>
void Factorial(int*);
void main()
{
int num;
printf("\nEnter the number : ");
scanf("%d",&num);
Factorial(&num);
}
void Factorial(int* num)
{
int f;
int i=1;
for(f=1;i<=*num;i++)
{
f = f*i;
}
printf("Factorial is : %d\n",f);
}
```