

Exp. No : 1.1 (a)

Date :

Swap Two Numbers

AIM:

To write a C-program to swap two numbers using pointers and function

PSEUDOCODE:

```
BEGIN
input two numbers num1,num2,temp
input pointers *a,*b
Display before swap values num1,num2
temp=*b
*b=*a
*a=temp
Display after swap values num1,num2
END
```

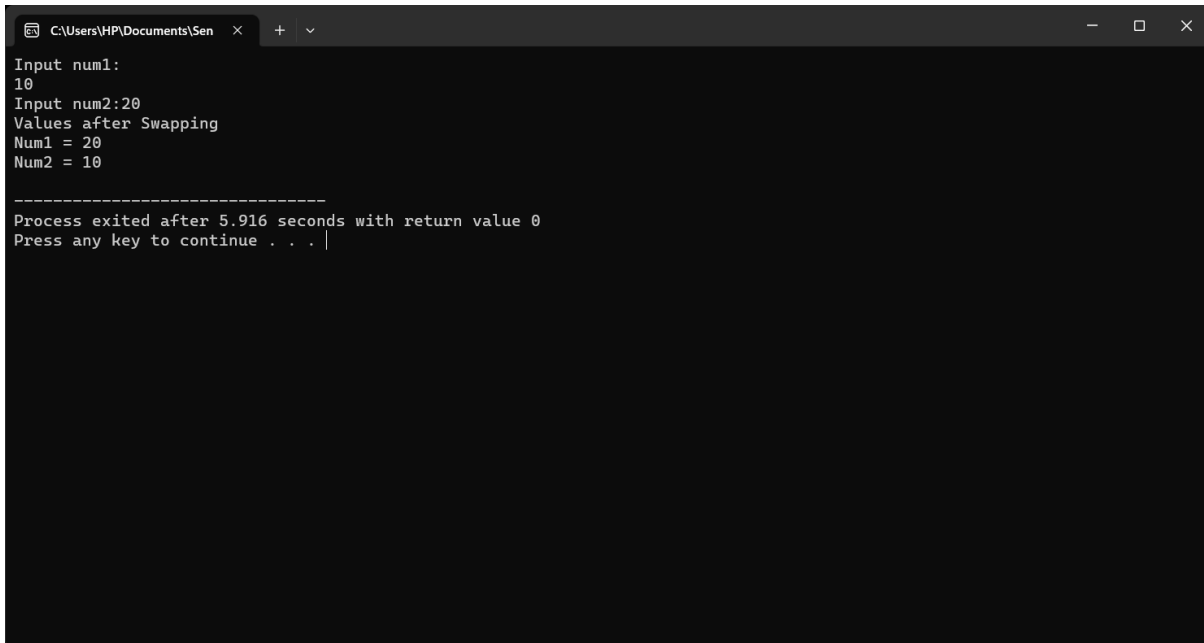
SOURCE CODE:

```
#include <stdio.h>

int main()
{
    int num1,num2, *a, *b, temp;

    printf("Input num1:\n");
    scanf("%d", &num1);
    printf("Input num2:");
    scanf("%d", &num2);
    a = &num1;
    b = &num2;
    temp = *b;
    *b = *a;
    *a = temp;
    printf("Values after Swapping\nNum1 = %d\nNum2 = %d\n", num1,num2);
    return 0;
}
```

OUTPUT:



```
C:\Users\HP\Documents\Sen x + v
Input num1:
10
Input num2:20
Values after Swapping
Num1 = 20
Num2 = 10
-----
Process exited after 5.916 seconds with return value 0
Press any key to continue . . . |
```

RESULT:

Thus the program to swap two numbers using pointers is executed successfully and the output is verified.

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Exp. No : 1.1(b)

Date :

To Calculate The Pooja's Account Balance

Aim:

To write C-program to Calculate Pooja's Account Balance after an attempted transaction

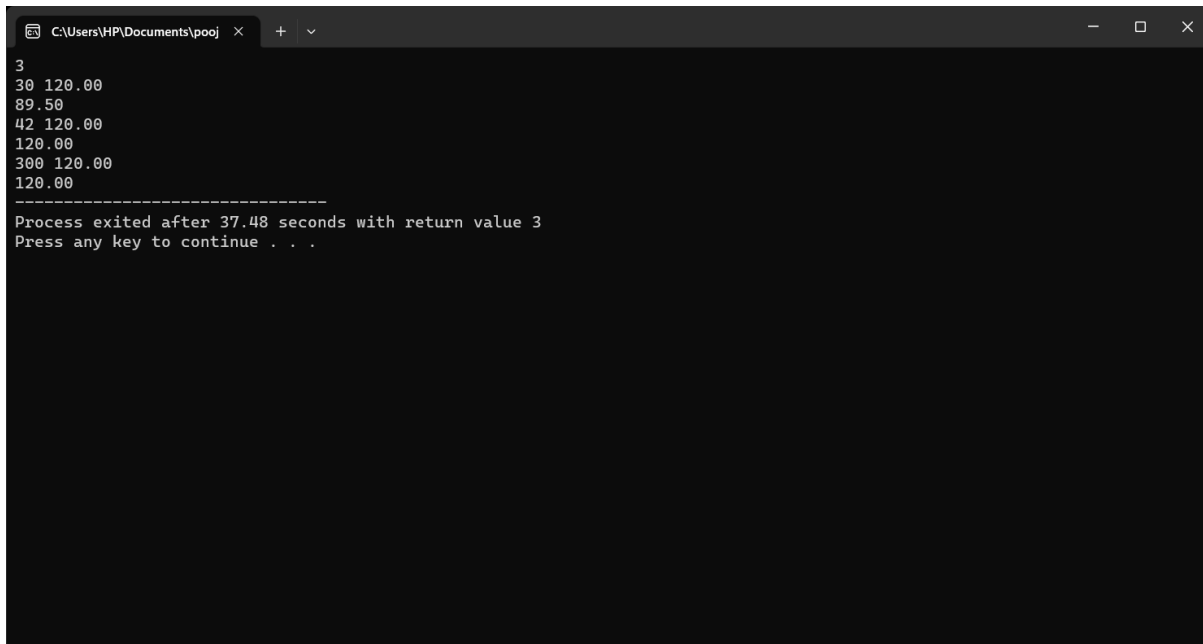
PSEUDOCODE:

```
BEGIN
  DECLARE i=0,t,x,*px as integer
  DECLARE c,y,*py as float
  Get t
  for i<t
    get x,y
    ASSIGN address of x,y to *px,*py
    If *px%5==0
      Calculate c=*py-(float)*px-0.5
      If c<0
        Print *py
      Else
        Print c
      END if
    Else
      Print *py
    END if
  END for
END
```

SOURCE CODE:

```
#include <stdio.h>
int main()
{
    int x,i,t,*px;
    float y,*py,c;
    scanf("%d",&t);
    for(i=0;i<t;i++){
        scanf("%d%f",&x,&y);
        px=&x;
        py=&y;
        if(*px%5==0){
            c=*py-(float)*px-0.5;
            if(c<0)
                printf("%.2f",*py);
            else
                printf("%.2f",c);}
        else{
            printf("%.2f",*py);} }
}
```

OUTPUT :

A screenshot of a Windows command prompt window. The title bar shows the file path 'C:\Users\HP\Documents\pooj' and standard window controls. The command prompt displays the following text:

```
3
30 120.00
89.50
42 120.00
120.00
300 120.00
120.00
-----
Process exited after 37.48 seconds with return value 3
Press any key to continue . . .
```

RESULT :

Thus the program for finding pooja's account balance using pointers is executed successfully and the output is verified

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Exp. No : 1.1 (c)

Date :

To Change The Constant Value

AIM:

To write a C-program to change the value of constant integer

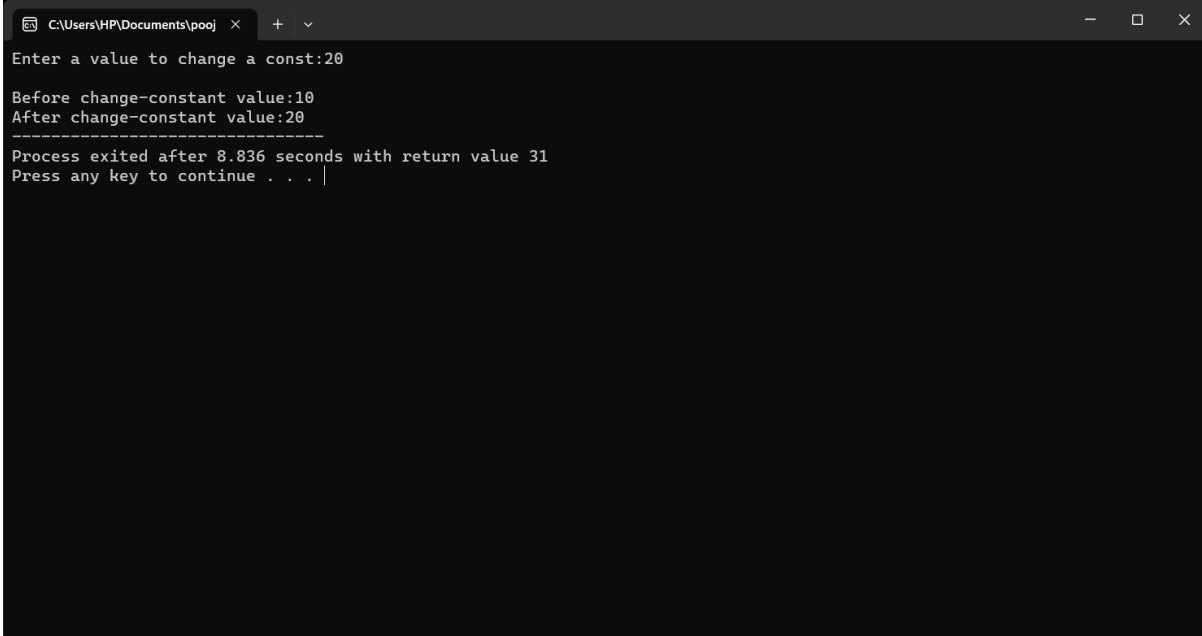
PSEUDOCODE:

```
BEGIN
DECLARE constant a=10 as a integer
DECLARE *ap,b as a integer
Print enter a value to change constant
Get b
Print Before change-constant value a
Initialize ap=&a,*ap=b
Print After change-constant value a
END
```

SOURCE CODE:

```
#include <stdio.h>
int main()
{
    const int a=10;
    int *ap,b;
    printf("Enter a value to change a const:");
    scanf("%d",&b);
    printf("\nBefore change-constant value:%d",a);
    ap=&a;
    *ap=b;
    printf("\nAfter change-constant value:%d",a);
}
```

OUTPUT:

A screenshot of a Windows command prompt window. The title bar shows the file path 'C:\Users\HP\Documents\pooj' and standard window controls. The command prompt displays the following text:

```
Enter a value to change a const:20
Before change-constant value:10
After change-constant value:20
-----
Process exited after 8.836 seconds with return value 31
Press any key to continue . . .
```

RESULT:

Thus the program for changing the value of constant using pointer is executed successfully and the output is verified.

Exp. No : 1.1(d)

Date :

To Check Course is Registered or Not

Aim:

To write C-program to determine it will be possible for all the N friends to register for the course or not.

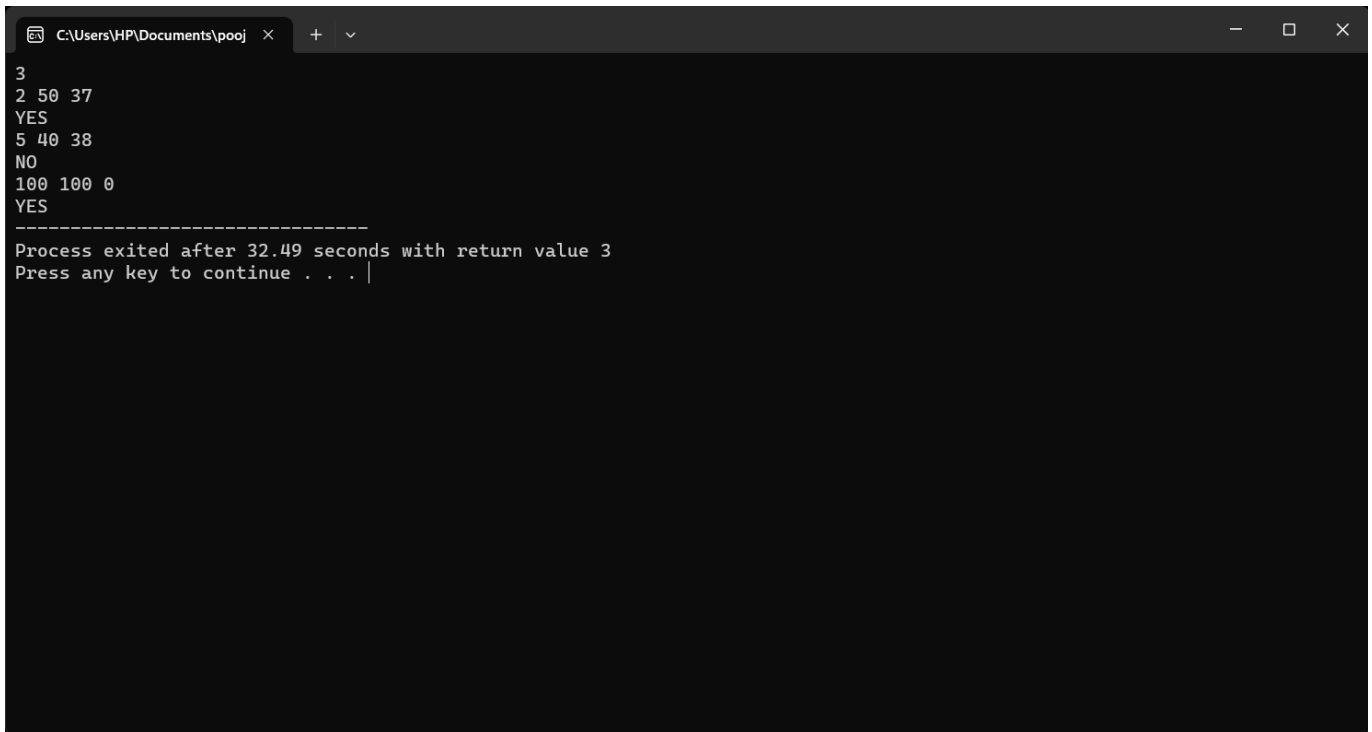
PSEUDOCODE:

```
BEGIN
DECLARE i=0,t,n,m,k,*pn,*pm,*pk,a as integer
Get t
for i<t
get n,m,k
ASSIGN address of n,m,k to *pn,*pm,*pk
a=n+k
If a<=m
Print YES
Else
Print NO
END if
END for
END
```

SOURCE CODE:

```
#include <stdio.h>
int main()
{
    int i,t,n,m,k,a;
    int *pn,*pm,*pk;
    scanf("%d",&t);
    for(i=0;i<t;i++){
        scanf("%d%d%d",&n,&m,&k);
        pn=&n;
        pm=&m;
        pk=&k;
        a=n+k;
        if(a<=m)
            printf("YES");
        else
            printf("NO");
    }
}
```

OUTPUT :

A screenshot of a Windows command prompt window. The title bar shows the file path 'C:\Users\HP\Documents\pooj' and standard window controls. The command prompt displays the following text: '3', '2 50 37', 'YES', '5 40 38', 'NO', '100 100 0', 'YES', followed by a line of dashes. Below the dashes, it says 'Process exited after 32.49 seconds with return value 3' and 'Press any key to continue . . . |'.

```
C:\Users\HP\Documents\pooj > 3
2 50 37
YES
5 40 38
NO
100 100 0
YES
-----
Process exited after 32.49 seconds with return value 3
Press any key to continue . . . |
```

RESULT :

Thus the program to determine it will be possible for all the N friends to register for the course or not is executed successfully and the output is verified

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