

//1. Write a program to swap 2 numbers without using third variable?

```
#include<stdio.h>

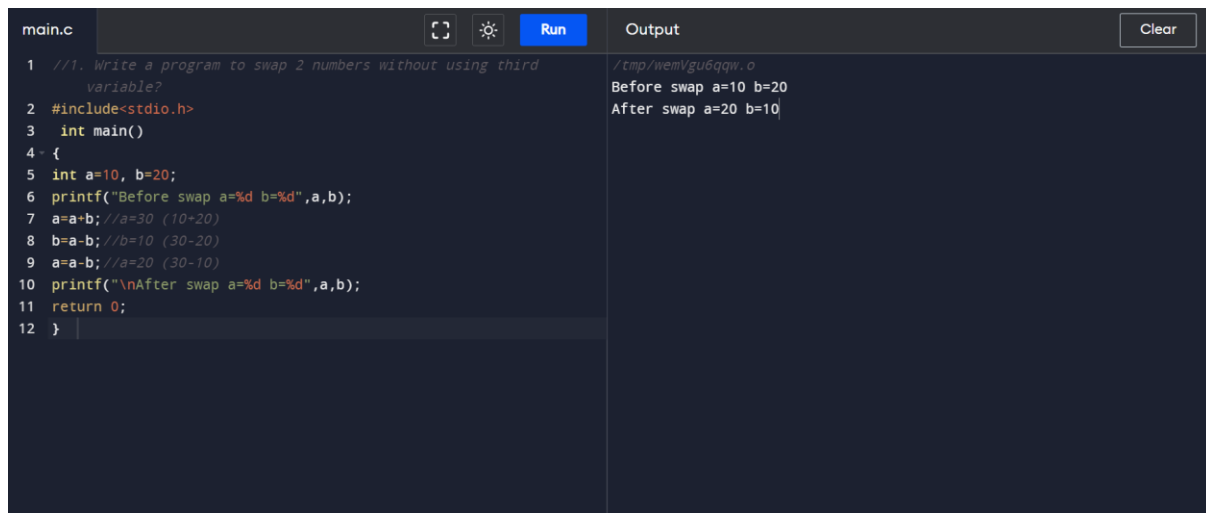
int main()
{
int a=10, b=20;

printf("Before swap a=%d b=%d",a,b);

a=a+b;//a=30 (10+20)
b=a-b;//b=10 (30-20)
a=a-b;//a=20 (30-10)

printf("\nAfter swap a=%d b=%d",a,b);

return 0;
}
```



The screenshot shows a code editor with a file named 'main.c'. The code is as follows:

```
1 //1. Write a program to swap 2 numbers without using third
  variable?
2 #include<stdio.h>
3 int main()
4 {
5     int a=10, b=20;
6     printf("Before swap a=%d b=%d",a,b);
7     a=a+b; //a=30 (10+20)
8     b=a-b; //b=10 (30-20)
9     a=a-b; //a=20 (30-10)
10    printf("\nAfter swap a=%d b=%d",a,b);
11    return 0;
12 }
```

The output window on the right shows the following output:

```
/tmp/wemVgu6qqw.o
Before swap a=10 b=20
After swap a=20 b=10
```

//2. Write a program to find given number is +ve or -ve number

```
#include<stdio.h>

int main()
{
    int a;

    printf("Enter the Value of a :");

    scanf("%d",&a);

    if(a>0)
    {
        printf("\na is Positive");
    }

    else if(a==0)
```

```

{
    printf("\na is Zero");
}
else
{
    printf("\na is Nagative");
}
}

```

```

main.c
1 //2. Write a program to find given number is +ve or -ve number
2
3 #include<stdio.h>
4 int main()
5 {
6     int a;
7     printf("Enter the Value of a :");
8     scanf("%d",&a);
9     if(a>0)
10    {
11        printf("\na is Positive");
12    }
13    else if(a==0)
14    {
15        printf("\na is Zero");
16    }
17    else
18    {
19        printf("\na is Nagative");
20    }
21 }
22

```

Output

```

/tmp/wemVgu6qqw.o
Enter the Value of a :10
a is Positive

```

//3. Write a program to find biggest number among 3 numbers

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

```
int main()
```

```
{
```

```
    int A;
```

```
    int B;
```

```
    int C;
```

```
    printf("Enter the numbers A: ");
```

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

```
    printf("Enter the numbers B: ");
```

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

```
    printf("Enter the numbers C: ");
```

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

```

        if (A >= B && A >= C)

            printf("%d is the largest number.", A);


        if (B >= A && B >= C)

            printf("%d is the largest number.", B);


        if (C >= A && C >= B)

            printf("%d is the largest number.", C);


    return 0;

}

```

main.c	Output
<pre> 1 //3. Write a program to find biggest number among 3 numbers 2 3 #include <stdio.h> 4 5 int main() 6 { 7 int A; 8 int B; 9 int C; 10 11 printf("Enter the numbers A: "); 12 scanf("%d", &A); 13 printf("Enter the numbers B: "); 14 scanf("%d", &B); 15 printf("Enter the numbers C: "); 16 scanf("%d", &C); 17 18 if (A >= B && A >= C) 19 printf("%d is the largest number.", A); 20 21 if (B >= A && B >= C) 22 printf("%d is the largest number.", B); 23 24 if (C >= A && C >= B) 25 printf("%d is the largest number.", C); 26 27 return 0; 28 } 29 </pre>	<pre> /tmp/wemVgu6qqw.o Enter the numbers A: 10 1Enter the numbers B: 20 Enter the numbers C: 392 392 is the largest number. </pre>

//4. Write a program to print even numbers up to 10

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

```
int main()
```

```

{

    printf("The First 10 Even Natural Numbers are\n");

    for (int i = 1; i <= 10; i++)

    {

        printf("%d\n", 2 * i);

    }

}

```

```
main.c Run Output Clear
1 //4. Write a program to print even numbers up to 10
2
3 #include <stdio.h>
4
5 int main()
6 {
7     printf("The First 10 Even Natural Numbers are\n");
8     for (int i = 1; i <= 10; i++)
9     {
10         printf("%d\n", 2 * i);
11     }
12 }
13
14
```

```
//tmp/wemVgu6qqw.o
The First 10 Even Natural Numbers are
2
4
6
8
10
12
14
16
18
20
```

// 5. Write a program to find the sum of 1+2+3+...+10

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

```
main()
```

```
{
```

```
int i=1,sum=0;
```

```
while(i<=10)
```

```
{
```

```
sum=sum+i;
```

```
i++;
```

```
}
```

```
printf("\n Sum = %d",sum);
```

```
}
```

```
main.c Run Output
1 // 5. Write a program to find the sum of 1+2+3+...+10
2 #include<stdio.h>
3 main()
4 {
5     int i=1,sum=0;
6     while(i<=10)
7     {
8         sum=sum+i;
9         i++;
10    }
11    printf("\n Sum = %d",sum);
12 }
13
```

```
//tmp/wemVgu6qqw.o
Sum = 55
```

//6. Write a program to find factorial of a given number using while loop

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

```
int main()
```

```
{
```

```
int n,f=1;
```

```
printf("\n Enter a number :");
```

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

```
while(n>=1)
```

```
{
```

```
f=f*n;
```

```
n--;
```

```

}

printf("\n Factorial = %d",f);

}

```

main.c	Run	Output
<pre> 1 //6. Write a program to find factorial of a given number using while loop 2 #include<stdio.h> 3 int main() 4 { 5 int n,f=1; 6 printf("\n Enter a number :"); 7 scanf("%d",&n); 8 while(n>=1) 9 { 10 f=f*n; 11 n--; 12 } 13 printf("\n Factorial = %d",f); 14 } 15 </pre>		<pre> /tmp/wemVgu6qqw.o Enter a number :15 Factorial = 2004310016 </pre>

//7. Write a program to print Fibonacci series using while loop

```

#include<stdio.h>

main()
{
    int a=0,b=1,c,n;

    printf("\n Enter Range :");

    scanf("%d",&n);

    printf("%d",a);

    printf("\t%d",b);

    c=a+b;

    while(c<=n)
    {
        printf("\t %d",c);

        a=b;

        b=c;

        c=a+b;

    }

}

```

```
main.c  Run  Clear
1 //7. Write a program to print Fibonacci series using while loop
2 #include<stdio.h>
3 main()
4 {
5     int a=0,b=1,c,n;
6     printf("\n Enter Range :");
7     scanf("%d",&n);
8     printf("%d",a);
9     printf("\t%d",b);
10    c=a+b;
11    while(c<=n)
12    {
13        printf("\t %d",c);
14        a=b;
15        b=c;
16        c=a+b;
17    }
18 }
19
20
```

Output

/tmp/nem1gu6qqw.o
Enter Range :10
0 1 1 2 3 5 8

//8. Write a program to find reverse number of a given number

```
#include<stdio.h>

main()
{
    int n,rem,rev=0;

    printf("\n Enter a number :");

    scanf("%d",&n);

    while(n!=0)
    {
        rem=n%10;
        rev=(rev*10)+rem;
        n=n/10;
    }

    printf("\n Reverse number = %d",rev);
}
```

```
main.c  Run  Clear
1 //8. Write a program to find reverse number of a given number
2 #include<stdio.h>
3 main()
4 {
5     int n,rem,rev=0;
6     printf("\n Enter a number :");
7     scanf("%d",&n);
8     while(n!=0)
9     {
10        rem=n%10;
11        rev=(rev*10)+rem;
12        n=n/10;
13    }
14    printf("\n Reverse number = %d",rev);
15 }
16
```

Output

/tmp/nem1gu6qqw.o
Enter a number :15
Reverse number = 51

//9. Write a program to check whether given alphabet is vowel or not using switch Case

```
#include<stdio.h>

main()
{
    char ch;

    printf("\n Enter a character :");

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

```

switch(ch)
{
case 'a': printf("\n Vowel"); break;
case 'e': printf("\n Vowel"); break;
case 'A': printf("\n Vowel"); break;
case 'E': printf("\n Vowel"); break;
default: printf("\n Not vowel"); break;
}
}

```

main.c	Run	Output
<pre> 1 //9. Write a program to check whether given alphabet is vowel or not using switch Case 2 #include<stdio.h> 3 main() 4 { 5 char ch; 6 printf("\n Enter a character :"); 7 scanf("%s",&ch); 8 switch(ch) 9 { 10 case 'a': printf("\n Vowel"); break; 11 case 'e': printf("\n Vowel"); break; 12 case 'A': printf("\n Vowel"); break; 13 case 'E': printf("\n Vowel"); break; 14 default: printf("\n Not vowel"); break; 15 } 16 } 17 18 </pre>		<pre> /tmp/wemVgu6qqw.o Enter a character :A Vowel </pre>

// 10. Write a program to find length of a given string

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

```
#include <string.h>
```

```
int main()
```

```
{
```

```
    char Str[1000];
```

```
    int i;
```

```
    printf("Enter the String: ");
```

```
    scanf("%s", Str);
```

```
    for (i = 0; Str[i] != '\0'; ++i);
```

```
    printf("Length of Str is : %d", i);
```

```
    return 0;
```

```
}
```

```
main.c  Run  Output  Clear
1 // 10. Write a program to find length of a given string
2 #include <stdio.h>
3 #include <string.h>
4
5 int main()
6 {
7     char Str[1000];
8     int i;
9
10    printf("Enter the String: ");
11    scanf("%s", Str);
12
13    for (i = 0; Str[i] != '\0'; ++i);
14
15    printf("Length of Str is : %d", i);
16
17    return 0;
18 }
19
```

```
/tmp/ueenVgu6qpw.o
Enter the String: 0
Length of Str is : 1
```

/*11. Using for loop print the following format

1

12

123

1234

12345

*/

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

```
main()
```

```
{
```

```
int i,j;
```

```
for(i=1;i<=5;i++)
```

```
{
```

```
for(j=1;j<=i;j++)
```

```
printf("%d",j);
```

```
printf("\n");
```

```
}
```

```
}
```

```
main.c  Run  Output  Clear
1 /*11. Using for loop print the following format
2 1
3 12
4 123
5 1234
6 12345
7 */
8
9 #include<stdio.h>
10 main()
11 {
12     int i,j;
13     for(i=1;i<=5;i++)
14     {
15         for(j=1;j<=i;j++)
16             printf("%d",j);
17         printf("\n");
18     }
19 }
20
```

```
/tmp/ueenVgu6qpw.o
1
12
123
1234
12345
```


/*12. Using for loop print the following format

A

AB

ABC

ABCD

ABCDE

*/

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

```
main()
```

```
{
```

```
int i,j;
```

```
for(i=65;i<=69;i++)
```

```
{
```

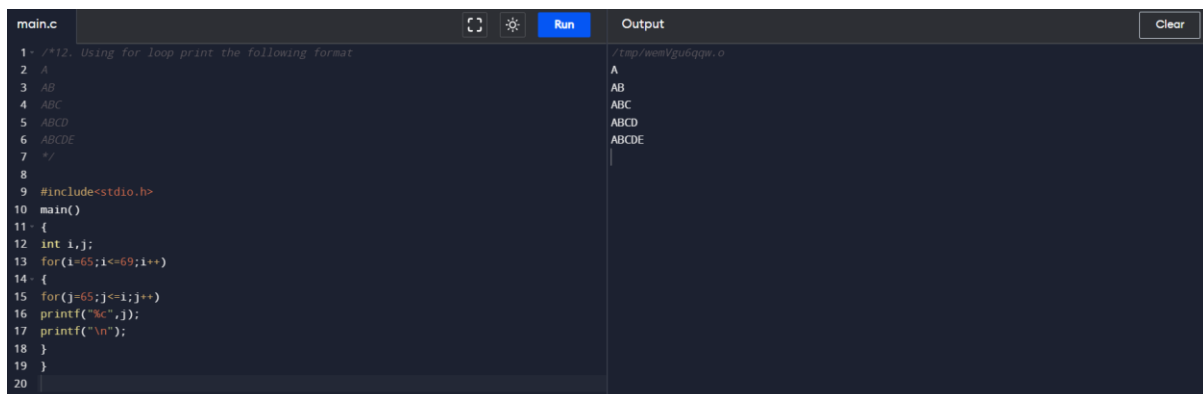
```
for(j=65;j<=i;j++)
```

```
printf("%c",j);
```

```
printf("\n");
```

```
}
```

```
}
```



```
main.c Run Output Clear
1- /*12. Using for loop print the following format
2- A
3- AB
4- ABC
5- ABCD
6- ABCDE
7- */
8-
9- #include<stdio.h>
10- main()
11- {
12-     int i,j;
13-     for(i=65;i<=69;i++)
14-     {
15-         for(j=65;j<=i;j++)
16-             printf("%c",j);
17-         printf("\n");
18-     }
19- }
20-
/tmp/.monVgu6qpw.o
A
AB
ABC
ABCD
ABCDE
```