

TUTORIALS – 7

(MODULE – 2)

1. Countdown:

Print numbers from 10 to 1 using a while loop.

main.c	   	Output
<pre>1 //MODULE - 2, TUTORIALS - 7 2 //1. Countdown: 3 //Print numbers from 10 to 1 using a while loop. 4 #include <stdio.h> 5 int main() 6 { 7 int a = 10; 8 while (a<11, a>0) 9 { 10 printf("Value of a:%d\n", a); 11 a--; 12 } 13 return 0; 14 }</pre>		<pre>/tmp/VX4c7aDKwK.o Value of a:10 Value of a:9 Value of a:8 Value of a:7 Value of a:6 Value of a:5 Value of a:4 Value of a:3 Value of a:2 Value of a:1</pre>

2. Sum of Natural Numbers:

Calculate the sum of the first N natural numbers using a while loop.

main.c	Output
<pre>1 //MODULE - 2, TUTORIALS - 7 2 //1. Sum of Natural Numbers: 3 //Calculate the sum of the first N natural numbers using a while loop 4 5 int main() 6 { 7 int i = 1; 8 int n; 9 int sum = 0; 10 printf("Enter the value of N to find the sum of First N Natural 11 Numbers:"); 12 scanf("%d",&n); 13 while(i<=n) 14 { 15 sum=sum+i; 16 i++; 17 } 18 printf("The sum of first %d Natural numbers is %d",n,sum); 19 return 0; 20 }</pre>	<pre>/tmp/SGcMm6HJ4J.o Enter the value of N to find the sum of First N Natural Numbers:45 The sum of first 45 Natural numbers is 1035</pre>

3. Factorial ($5!=1*2*3*4*5$)

Compute the factorial of a given number using a while loop.

main.c	Output
<pre>1 //MODULE - 2, TUTORIALS - 7 2 //3. Factorial (5!=1*2*3*4*5) 3 //Compute the factorial of a given number using a while loop. 4 #include <stdio.h> 5 int main() 6 { 7 int num; 8 int i=1; 9 int factorial=1; 10 printf("Enter a number to find the factorial:"); 11 scanf("%d",&num); 12 while(i<=num) 13 { 14 factorial=factorial*i; 15 i++; 16 } 17 printf("The Factorial of %d is %d",num,factorial); 18 return 0; 19 } 20 </pre>	<pre>/tmp/WdmYdDd71t.o Enter a number to find the factorial:5 The Factorial of 5 is 120</pre>

4. Even Numbers:

Print all even numbers between 1 and 20 using a while loop.

main.c	Output
<pre>1 //MODULE - 2, TUTORIALS - 7 2 //4. Even Numbers: 3 //Print all even numbers between 1 and 20 using a while loop. 4 #include <stdio.h> 5 int main() 6 { 7 int i=1; 8 while(i<=20) 9 { 10 if(i%2==0) 11 printf("%d\n",i); 12 i++; 13 } 14 return 0; 15 }</pre>	<pre>/tmp/6eJDC2GTZ5.o 2 4 6 8 10 12 14 16 18 20</pre>

5. Table of a Number (n*i= n*I format to print the output)

Display the multiplication table of a given number using a while loop.

main.c	Output
<pre>1 //MODULE - 2, TUTORIALS - 7 2 //5. Table of a Number (n*i= n*I format to print the output) 3 //Display the multiplication table of a given number using a while loop. 4 #include <stdio.h> 5 int main() 6 {int i=1,n,multiply; 7 printf("Enter the value of n to display its multiplication table:"); 8 scanf("%d",&n); 9 while(i<=10) 10 { 11 multiply=i*n; 12 printf("%d*%d=%d\n",n,i,multiply); 13 i++; 14 } 15 return 0; 16 } 17</pre>	<pre>/tmp/4tWe4ApBcI.o Enter the value of n to display its multiplication table:2 2*1=2 2*2=4 2*3=6 2*4=8 2*5=10 2*6=12 2*7=14 2*8=16 2*9=18 2*10=20</pre>

6. Reverse a Number:

Reverse the digits of a given number using a while loop.

main.c



Save

Run

Output

```
1 //MODULE - 2, TUTORIALS - 7
2 //Reverse a Number:
3 //Reverse the digits of a given number using a while loop.
4 #include <stdio.h>
5 int main()
6 {
7     int rev=0,n;
8     printf("Enter any number:");
9     scanf("%d",&n);
10    while(n>0)
11    {
12        rev=rev*10+n%10;
13        n=n/10;
14    }
15    printf("%d",rev);
16    return 0;
17 }
18
```

/tmp/7ndbj6ZSwD.o
Enter any number:1947
7491|