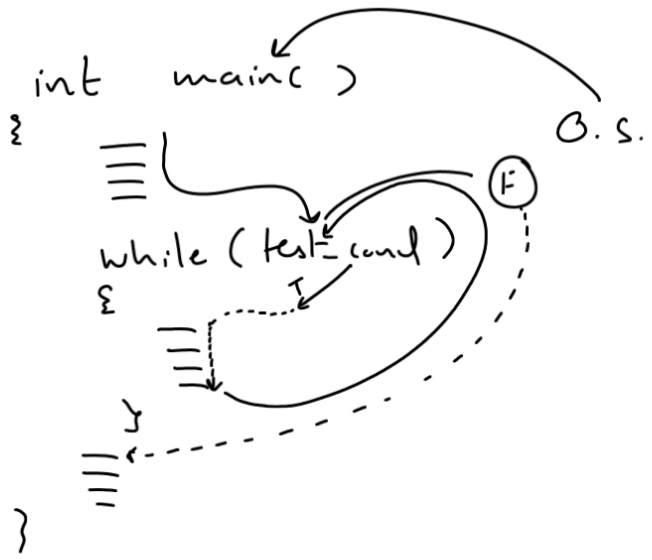
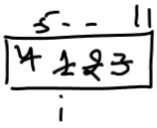
Loop (Iterative Stmt)

1. while
2. do . . while
3. for

Syntax of "while" Loop



WAP to print first 10 natural numbers




```
#include <stdio.h>
int main()
{
  int i;
  i=1;
  while(i<=10)
  {
    printf("\n%d",i);

    i=i+1;
  }
return 0;
}
```

1
2
3
4
5
.
.
10

Guess The Output

```
#include <stdio.h>
int main()
{
  int i;
  i=1;
  while(i>=10)
  {
    printf("\n%d",i);

    i=i+1;
  }
return 0;
}
```

Guess The Output

```
#include <stdio.h>
int main()
{
  int i;
  i=1;
  while(i<=10)
  {
    printf("\n%d",i);

    i=i-1;
  }
return 0;
}
```

O/P:

====

-2147483648 To 2147483647

Guess The Output

```
#include <stdio.h>
int main()
{
  int i;
  i=1;
  while(i<=10)
    printf("\n%d",i);

    i=i+1;
return 0;
}
```

O/P:

====

1 ,1 ,1 infinite times

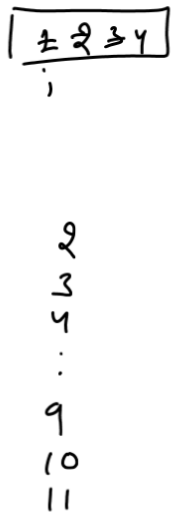
```
while (i<=10)
{
    printf("\n%d",i);
}
i=i+1;
```

Guess The Output

```
#include <stdio.h>
int main()
{
   int i;
   i=1;
   while(i<=10)
  {
     i=i+1;
     printf("\n%d",i);
   }
return 0;
}
```

O/P:

====



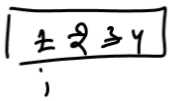
Guess The Output

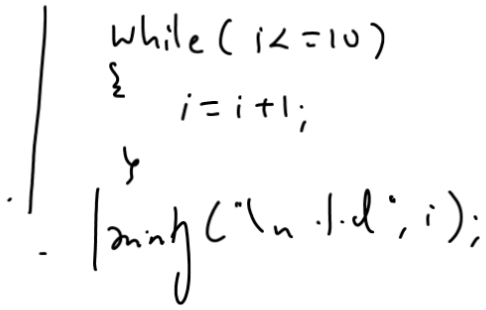
```
#include <stdio.h>
int main()
{
   int i;
   i=1;
   while(i<=10)
     i=i+1;
     printf("\n%d",i);
 return 0;
}
```

O/P:

====

11 ✓

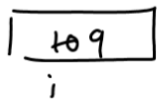




WAP to print first 10 natural numbers in reverse order

```
#include <stdio.h>
int main()
{
   int i;
   i=10;
   while(i>=1)
   {
      printf("\n%d",i);

      i=i-1;
   }
return 0;
}
```

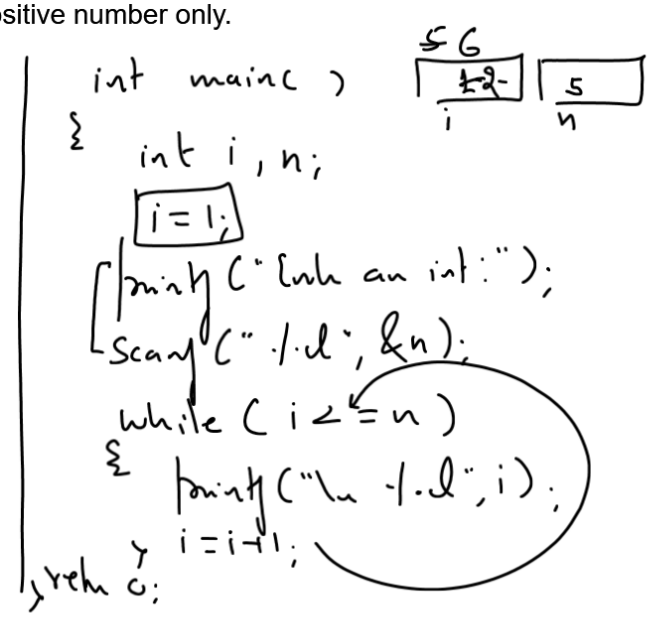


10
9
:
1

```
int a=10;
printf("%d",a);
a=a+1;
printf("\n%d",a);
```

WAP to accept an integer from the user and print all the nos from 1 to that number.
Assume that user will input a positive number only.

SAMPLE OUTPUT:
==========
Enter an int: 5
1
2
3
4
5



WAP to accept an integer from the user and print all the nos from that number to 1 .Assume that user will input a positive number only.

SAMPLE OUTPUT:
==========
Enter an int: 5
5
4
3
2
1

```
int main()
{
  int i,n;
  printf("Enter an int:");
  scanf("%d",&n);
  i=n;
  while(i>=1)
  {
    printf("\n%d",i);
    i=i-1;
  }
return 0;
}
```

```
int main()
{
  int n;
  printf("Enter an int:");
  scanf("%d",&n);
  while(n>=1)
  {
     printf("\n%d",n);
     n=n-1;
  }
return 0;
}
```

765 ÷ 10

n

7
6
5
.
.
.
2
1

WAP to print all the EVEN numbers from 1 to 20

```
int main()
{
   int i=1;
   while(i<=20)
   {
      if(i%2==0)
      {
         printf("\n%d",i);
      }
     i=i+1;
   }
return 0;
}
```

456
123
1

```
int main()
{
   int i=2;
   while(i<=20)
   {
      printf("\n%d",i);
     i=i+2;
   }
return 0;
}
```

ASSIGNMENTS:
==========
Qn1. WAP to accept an int from the user and print the sum of all the numbers from 1 to that number. Assume that the user will input positive number only

SAMPLE OUTPUT:
==========
Enter an int : 5
Sum is 15

SAMPLE OUTPUT:
==========
Enter an int : 7
Sum is 28

Qn2. WAP to accept an int from the user and if it is positive then print all the numbers from 1 to that number and if it is negative then print all the nos from that number to -1

SAMPLE OUTPUT:
==========
Enter an int : 5
1
2
3
4
5

SAMPLE OUTPUT:
==========
Enter an int : -4
-4
-3
-2
-1