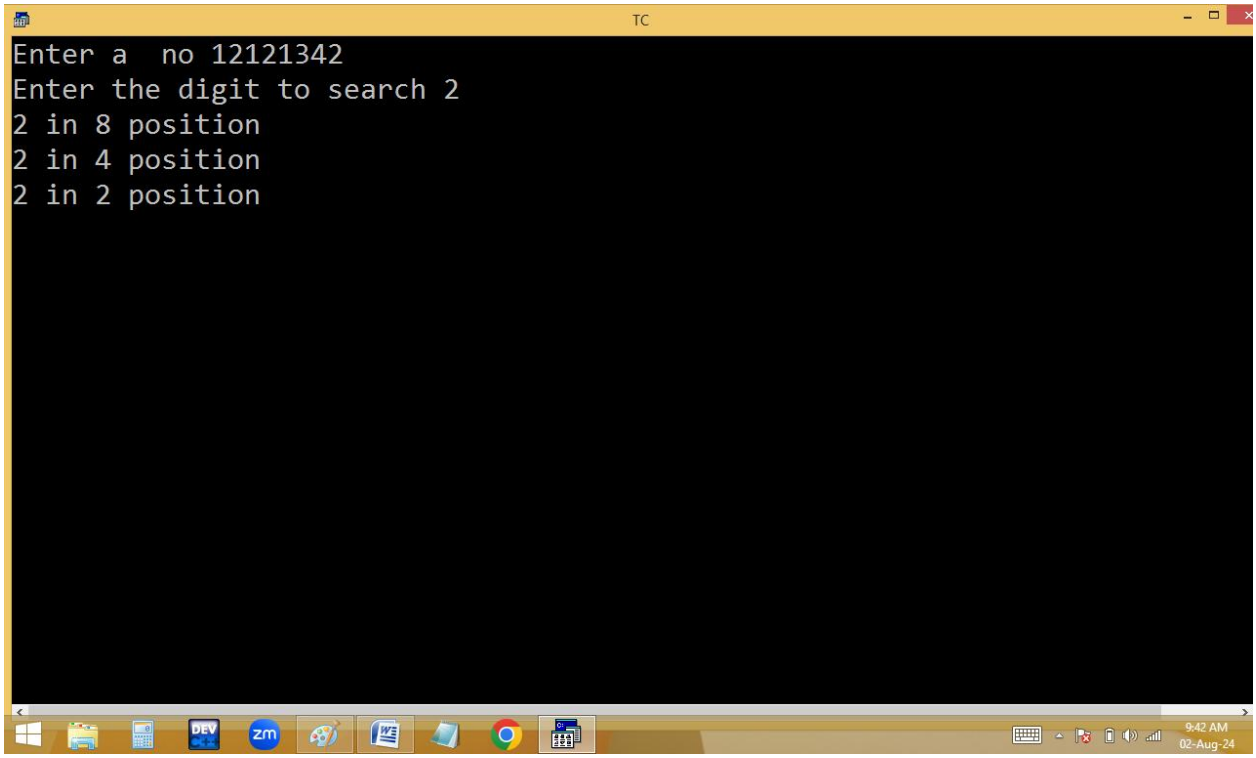
Finding the no position:

1084 ➔ 8 position is 3

```
      Line 18    Col 34  Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
long m,n; int c=0, d,f=0;
clrscr();
printf("Enter a  no "); scanf("%ld",&n);m=n;
printf("Enter the digit to search "); scanf("%d",&d);
do{c++;m=m/10;}while(m!=0);  /* counting no of digits */
do
{
if(n%10==d)printf("%d in %d position\n",d,c,f=1);
c--;
n=n/10;
}while(n!=0);
if(f==0)printf("%d not found",d);
getch();
}
```

```
Enter the digit to search 4
4 not found_
```


TC
Enter a no 12121342
Enter the digit to search 2
2 in 8 position
2 in 4 position
2 in 2 position
9:42 AM
02-Aug-24

Method2:

TC

File Edit Run Compile Project Options Debug Break/watch

Line 1 Col 33 Insert Indent Tab Fill Unindent * E:9AM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
long m,n,rev=0; int c=1, d,f=0; clrscr();
printf("Enter a  no "); scanf("%ld",&n);m=n;
while(m) { rev=rev*10+(m%10);m=m/10; } /* rev */
printf("Enter the digit to search "); scanf("%d",&d);
do
{
if(rev%10==d)printf("%d in %d position\n",d,c,f=1);
c++;
rev=rev/10;
}while(rev!=0);
if(f==0)printf("%d not found",d);
getch();
}
```

TC

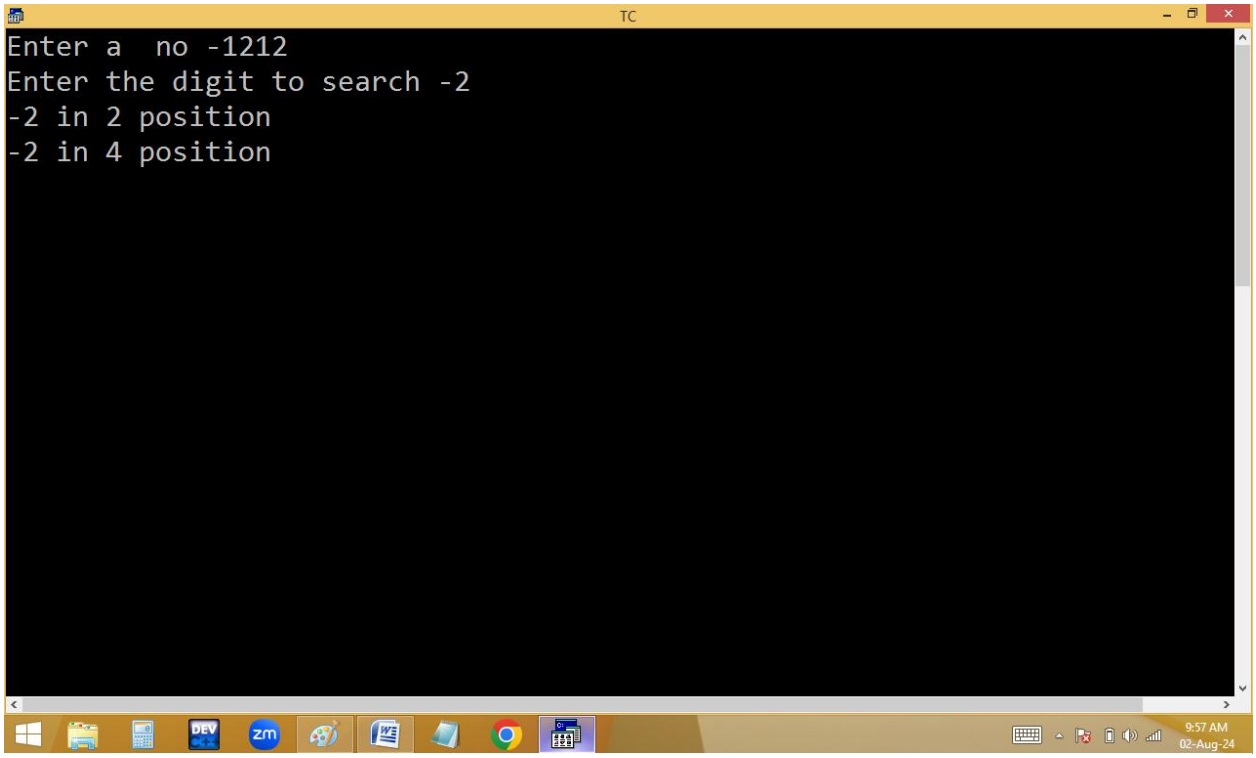
```
Enter a  no 1212132
Enter the digit to search 2
2 in 2 position
2 in 4 position
2 in 7 position
```

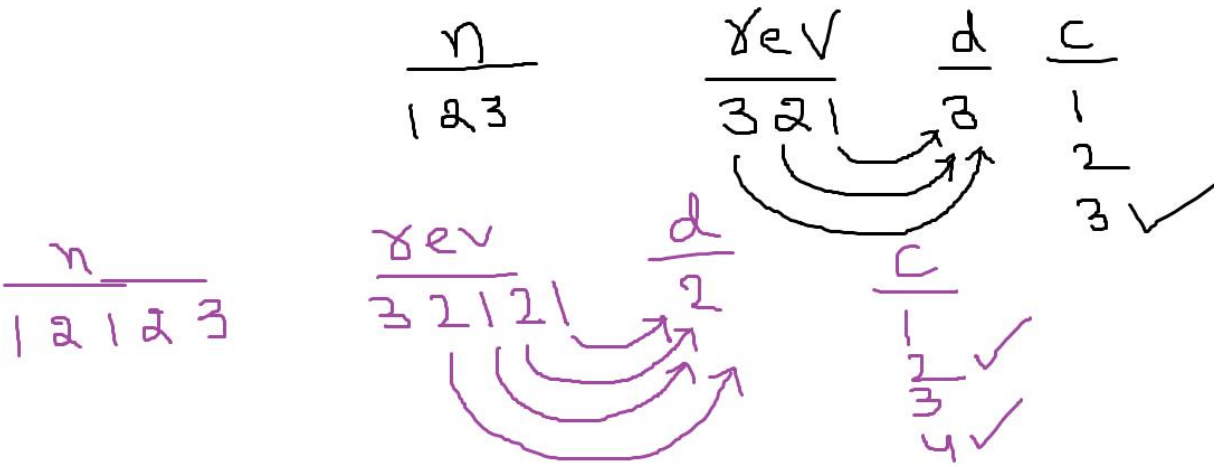
```
Enter a  no 123
Enter the digit to search 3
3 in 3 position
```

```
Enter a  no 123
Enter the digit to search 4
4 not found
```

```
Enter a  no 0
Enter the digit to search 0
0 in 1 position
```

```
Enter a  no -1232
Enter the digit to search 2
2 not found
```


TC
Enter a no -1212
Enter the digit to search -2
-2 in 2 position
-2 in 4 position
9:57 AM
02-Aug-24


n
123
rev
321
d
3
c
1
2
3
n
12123
rev
32121
d
2
c
1
2
3
4

n	rev	d	c
1232	232 % 10 = 1 ==	2	1
	23 % 10 = 2 ==	2	2
	2 % 10 = 3 ==	2	3
	2 % 10 = 2 ==	2	4

```
do
{
if(rev%10==d)
p("%d in %d pos\n",d, c,f=1);
c++;
rev=rev/10;
}while(n!=0);
```

No to text conversion:

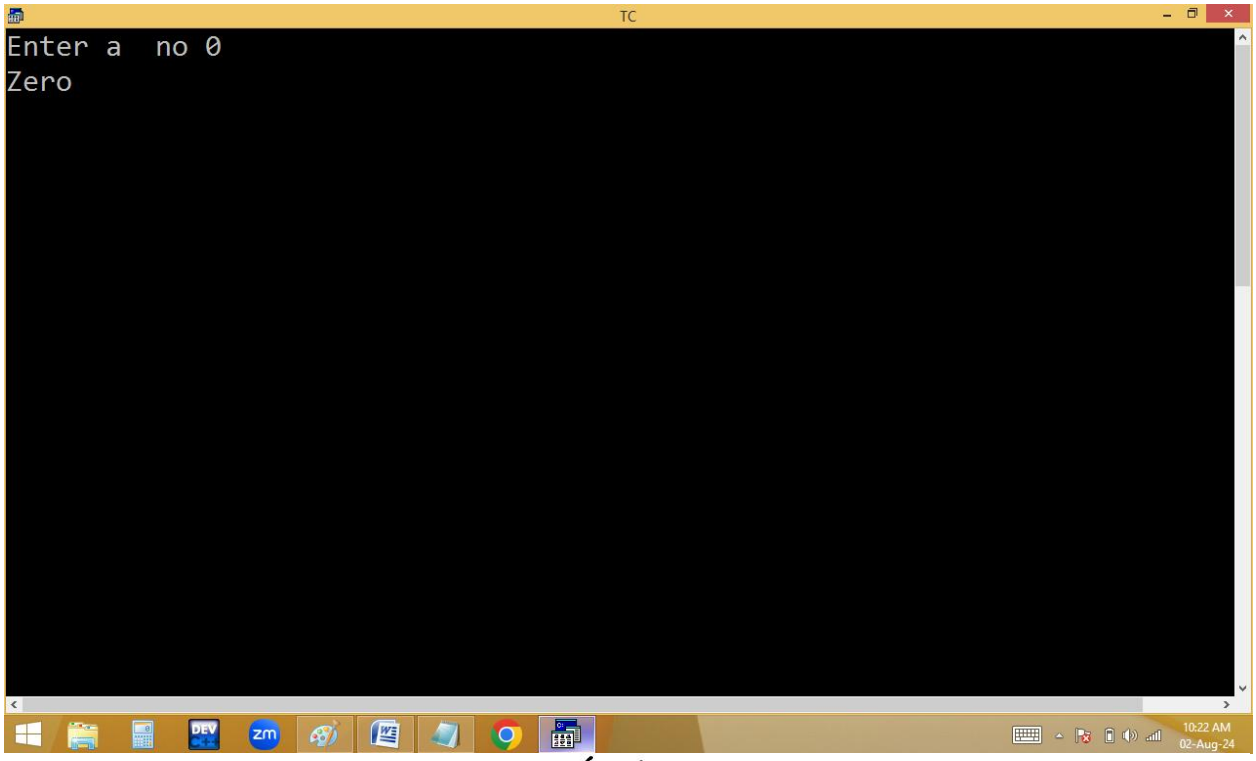
102 ➔ One Zero Two

```
#include<stdio.h>

#include<conio.h>

void main()

{

long m,n,rev=0; int c=1, d,f=0; clrscr();

printf("Enter a  no "); scanf("%ld",&n);if(n<0)printf("-",n=-n);
m=n;

while(m) { rev=rev*10+(m%10);m=m/10; } /* rev */

do

{
```

```
switch(rev%10)
{
case 0: printf("Zero");break;
case 1: printf("One");break;
case 2: printf("Two");break;
case 3: printf("Three");break;
case 4: printf("Four");break;
case 5: printf("Five");break;
case 6: printf("Six");break;
case 7: printf("Seven");break;
case 8: printf("Eight");break;
case 9: printf("Nine");break;
}printf("  ");rev=rev/10;
}while(rev!=0);
while(n!=0 && n%10==0)printf("Zero  ",n=n/10);
getch();
}
```

```
Enter a  no 100
One  Zero  Zero
```

```
Enter a  no -1002900
-One  Zero  Zero  Two  Nine  Zero  Zero
```




```
do
{
switch(rev%10)
{
case  0: p("Zero");b;
case 1: p("One");b;
case 2: p("Two";b;
case 9: p("Nine");
}
p(" "); rev=rev/10;
while(rev);
```

n: 102

rev:
20x%10=1 one
20%10=0 Zero
2%10=2 Two

n: 100%10=0
10%10=0
1%10=1

rev: ~~00~~1 one Zero Zero

```
while(n%10==0&&n!=0)p("Zero ",n=n/10);
```

Finding Armstrong no:

1 to 9, 153, 370, 371, 407, 1634, 8208,….

TC

File Edit Run Compile Project Options Debug Break/watch

Line 6 Col 18 Insert Indent Tab Fill Unindent * E:9AM.C

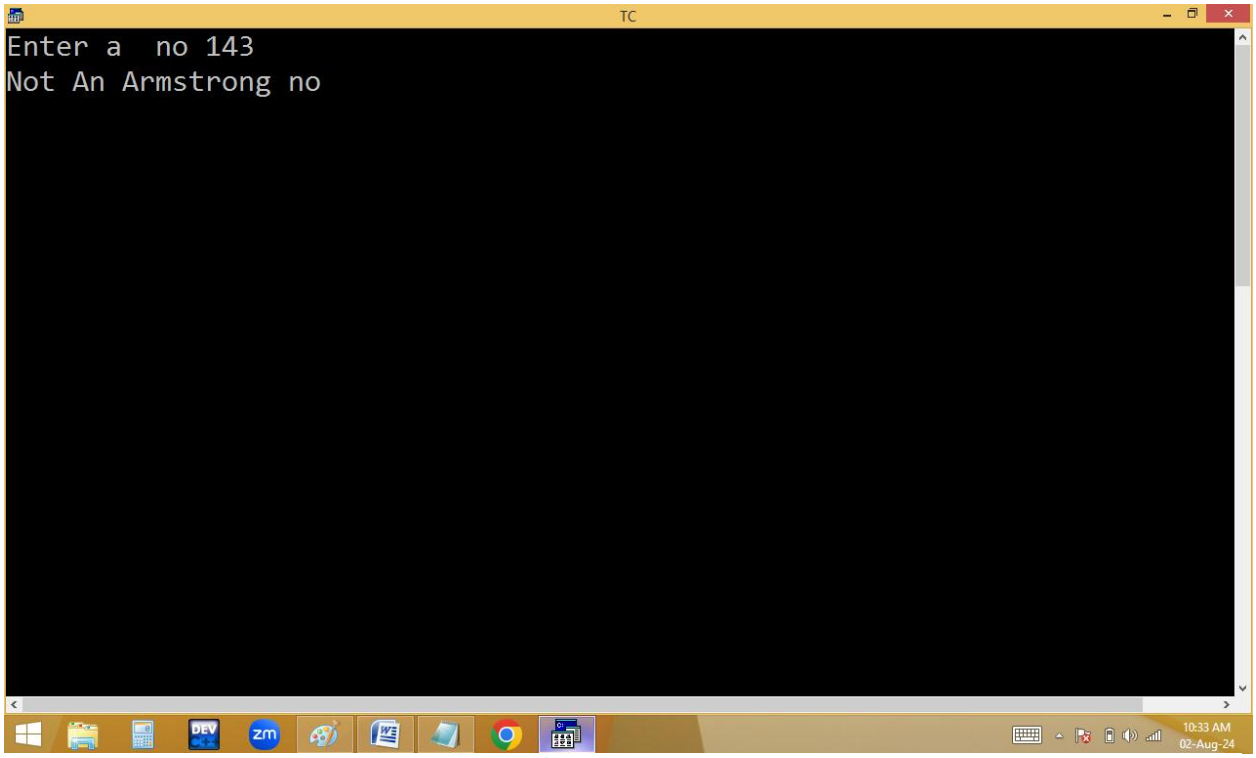
```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main()
{
int n,m,c=0,r,s=0; clrscr();
printf("Enter a  no "); scanf("%d",&n); m=n;
while(m!=0){c++;m=m/10;}
m=n;
while(m)
{
r=m%10; s+=pow(r,c); m/=10;
}
puts(n==s?"Armstrong no":"Not An Armstrong no");
getch();
}
```

TC

```
Enter a  no 153
Armstrong no
```

```
Enter a  no 1634
Armstrong no
```

```
Enter a  no 9
Armstrong no
```




```
while( m!=0 )
{
r= m % 10 ;
s + = pow( r, c );
m/=10;
}
puts(n==s?"Arm":"Not");
```

n: 153

m: 153

c: 0 1 2 3

m=n

153 %10 = 3

15 %10 = 5

1 %10 = 1

r: 3 5 1

s: $0+3^3=27$

$27+5^3=152$

$152+1^3=153$

$143 = 1+64+27 = 92$

for loop:

It is an entry control loop.

for is a keyword.

It is also used to repeat a program several times based on a condition.

When compared with while and do while, for loop is looking to be smart. In for it is compulsory to maintain two semicolons. For works without condition also and default condition is always 1 i.e. true.

Generally for loop is having 3 expressions.

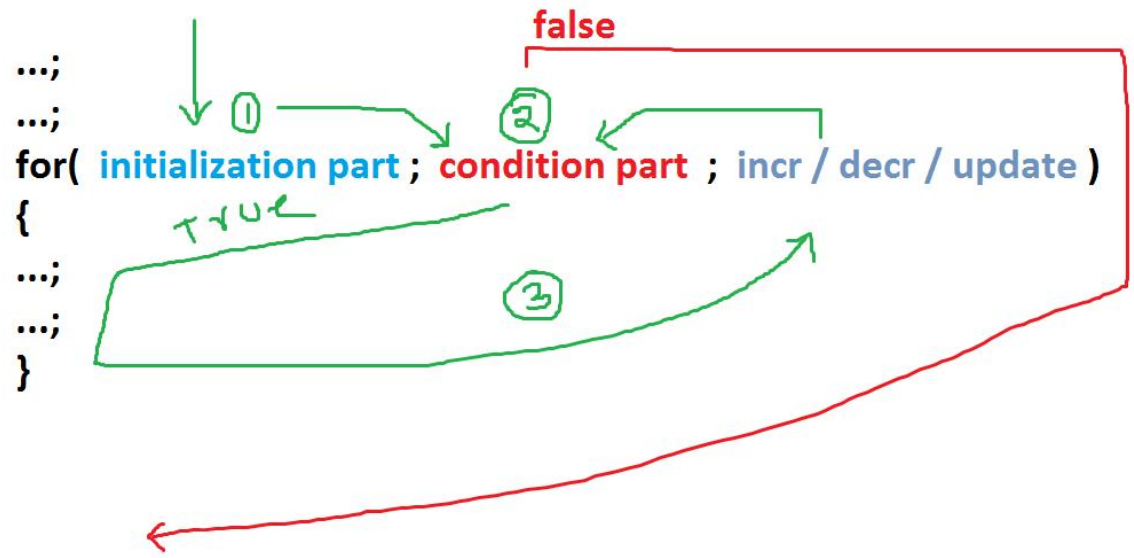
1. **Initialization**
2. **Test condition / expression**
3. **Increment/decrement / updation**

At first entry of for loop the initialization part is executed and later the test condition is checked. If the condition is true then the for block statements are executed. After completion of the block, the increment or decrement part is executed. Later once again the test condition is evaluated. If it is true then once again for block statements are executed. Like this the process is continued until the condition becomes false. Here the initialization part is executed only once, at the time of loop beginning.

It is mandatory to maintain 2 semicolon (;) in a for loop.

If the for loop is having more than three expressions, it is mandatory to separate the expressions with , separator.

If the for loop is having less than three expressions, then leave the expressions with empty semicolon.



```
for( exp ;   exp  ;   exp )
{
}
```

```
for( exp, exp ; exp ; exp,   exp )
{

}
```

```
for( )
{
}
```

```
for( ; exp ; )
{
}
```

```
for( ; ; )
{
}
```
