STRINGS

- A group of characters is called string.
- It is one dimensional character array.
- It is alpha-numeric.
- It is an implicit pointer.

Note:

- **One byte should be left for Null char(\0). Otherwise we are getting garbage or junk values. Null char indicates string is completed.**
- **String variable Size can't be less than string. Otherwise we are getting error.**
- **Using = operator, we can't copy a string into another. We have to use strcpy() or copy character by character manually.**
- **Using == (comparison) operator, we can't compare two strings. Use strcmp() or compare the characters one by one manually.**
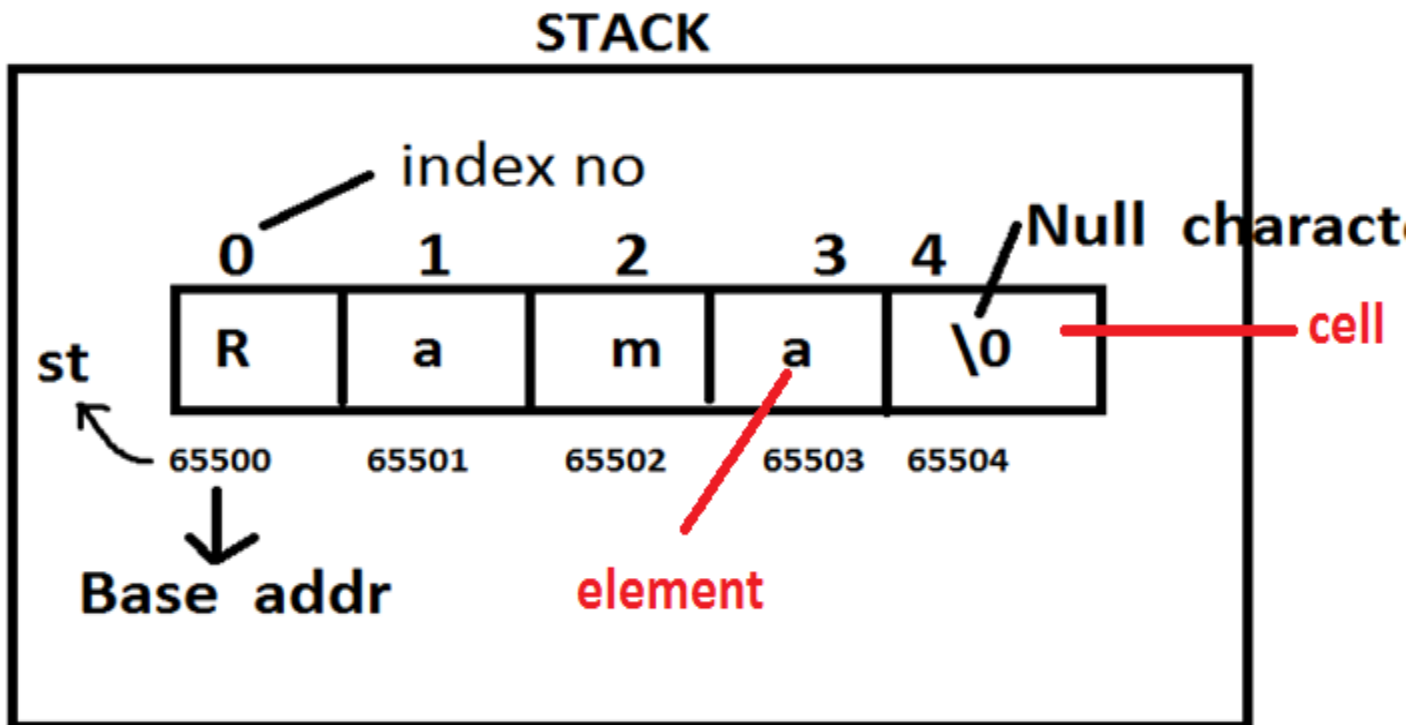
Syntax:

char variable [size] = "string";

or

char variable[ ]="string";

Eg: char   st[5] = "Rama";

STACK

0	1	2	3	4
R	a	m	a	\0

index no

Null character

cell

st

65500   65501   65502   65503   65504

Base addr   element

Note: String is implicit pointer because of string variable stores base address.

String declaration methods:

char   st [5] ="rama"; Ok

char   st [20] =" Naresh   It"; Ok

char   st [4] = { 'r', 'a', 'm' }; Ok   → char array.

char st[3]= "ram"; It gives garbage values in printing.

char   st [3] = "rama"; error

char st[0]; error

char st[0]="abc"; Ok

char st[-5]; error

char st[5.5]; error

char   st[5%3]; Ok   → char st[2];

char st[3+2]; → st[5] → Ok

char st[ ] ="Ram"; Ok.

char st[ ] ; error

int n=20;
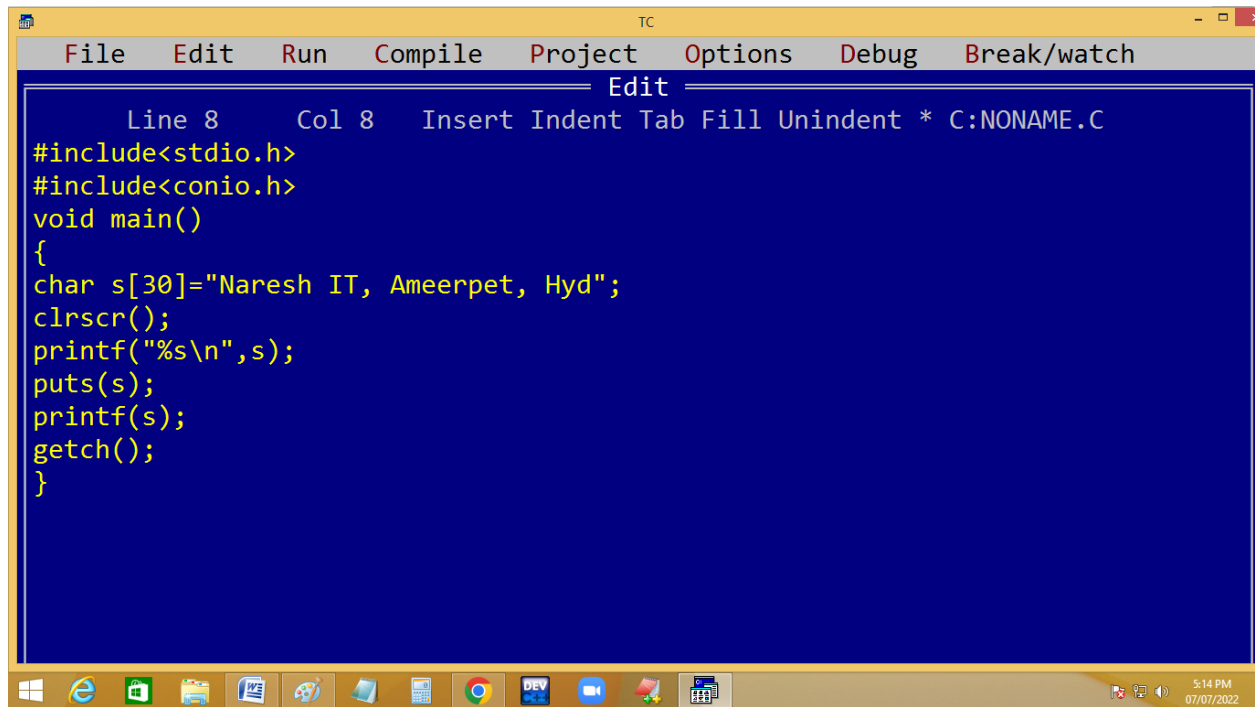
char st[n]; No

#define   n 20

char st[n]; Ok

Note: String variable size always constant positive integer value.
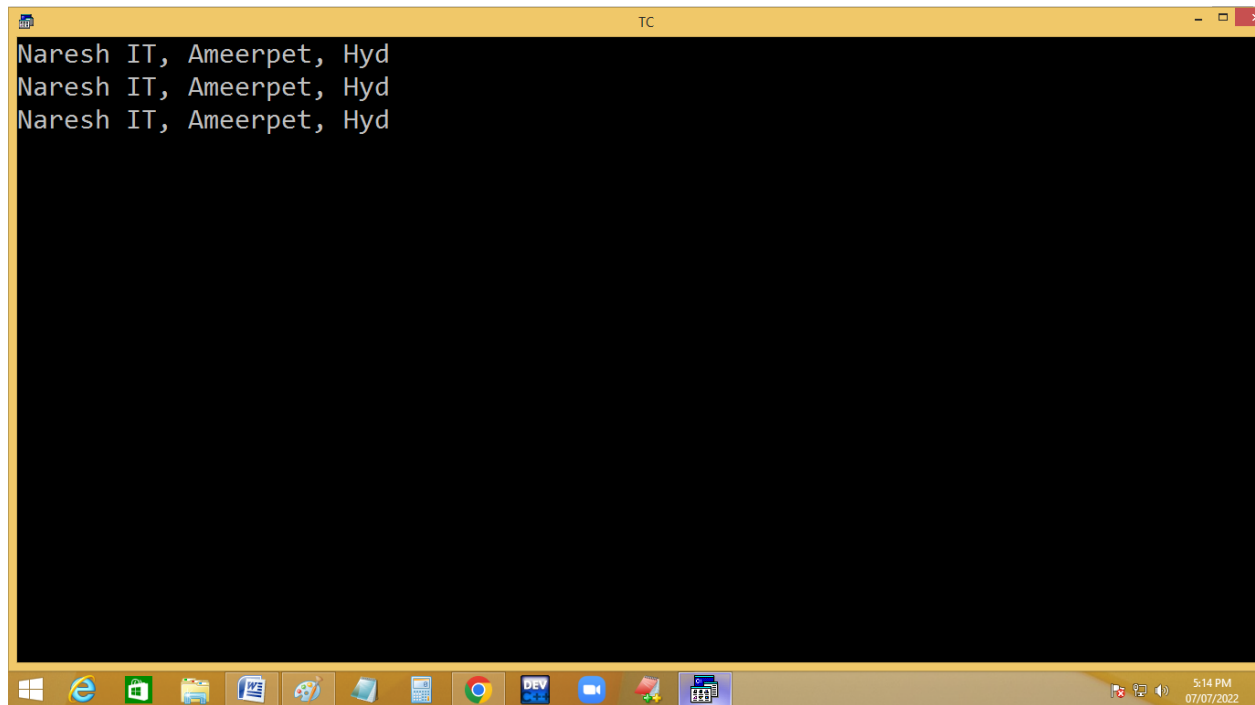
Eg: Direct initialization of a string
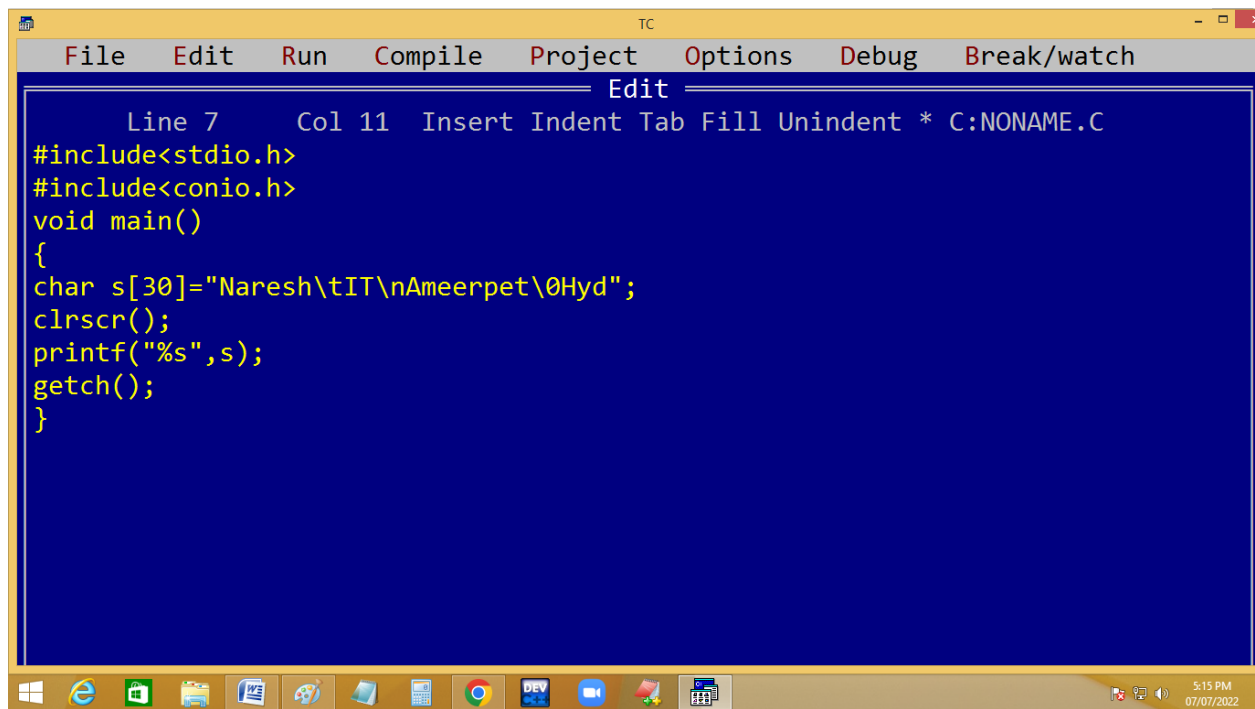
```c
#include<stdio.h>
#include<conio.h>
void main()
{
char s[30]="Naresh IT, Ameerpet, Hyd";
clrscr();
printf("%s\n",s);
puts(s);
printf(s);
getch();
}
```

```
Naresh IT, Ameerpet, Hyd
Naresh IT, Ameerpet, Hyd
Naresh IT, Ameerpet, Hyd
```
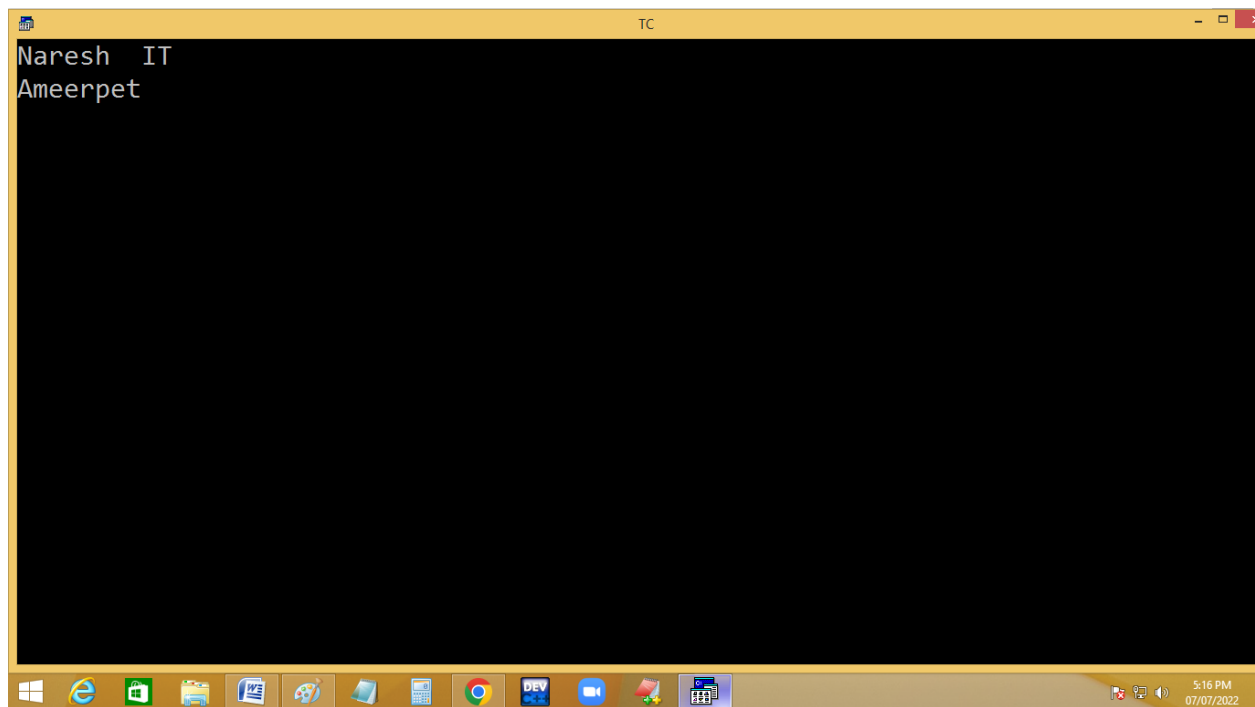
File   Edit   Run   Compile   Project   Options   Debug   Break/watch

Edit

Line 7   Col 11   Insert Indent Tab Fill Unindent * C:NONAME.C

```c
#include<stdio.h>
#include<conio.h>
void main()
{
char s[30]="Naresh\tIT\nAmeerpet\0Hyd";
clrscr();
printf("%s",s);
getch();
}
```

5:15 PM
07/07/2022

```
Naresh   IT
Ameerpet
```

5:16 PM
07/07/2022

```c
#include<stdio.h>
#include<conio.h>
void main()
{
char s1[2]="K",s2[]="K",s3[2]={'K'},s4[]={'K','\0'},s5[]={'K'};
clrscr();
puts(s1);
puts(s2);
puts(s3);
puts(s4);
puts(s5);
getch();
}
```

```
K
K
K
K
KdΦ ↔☺☺
```
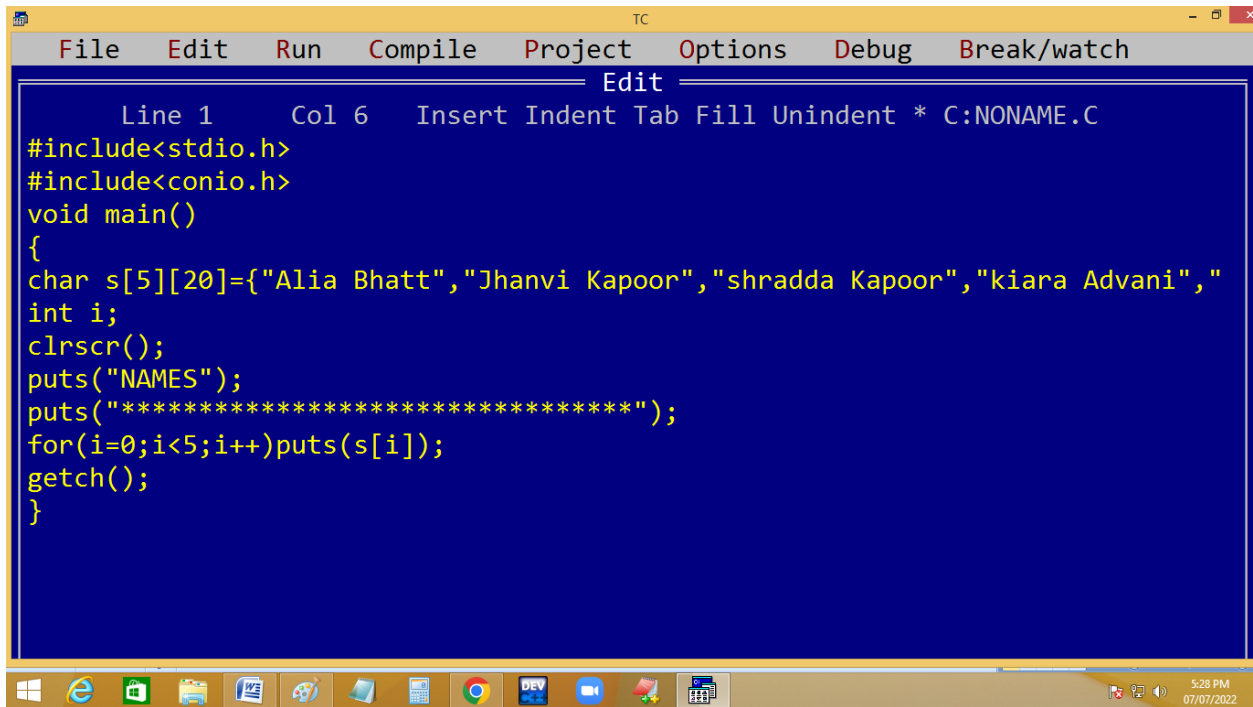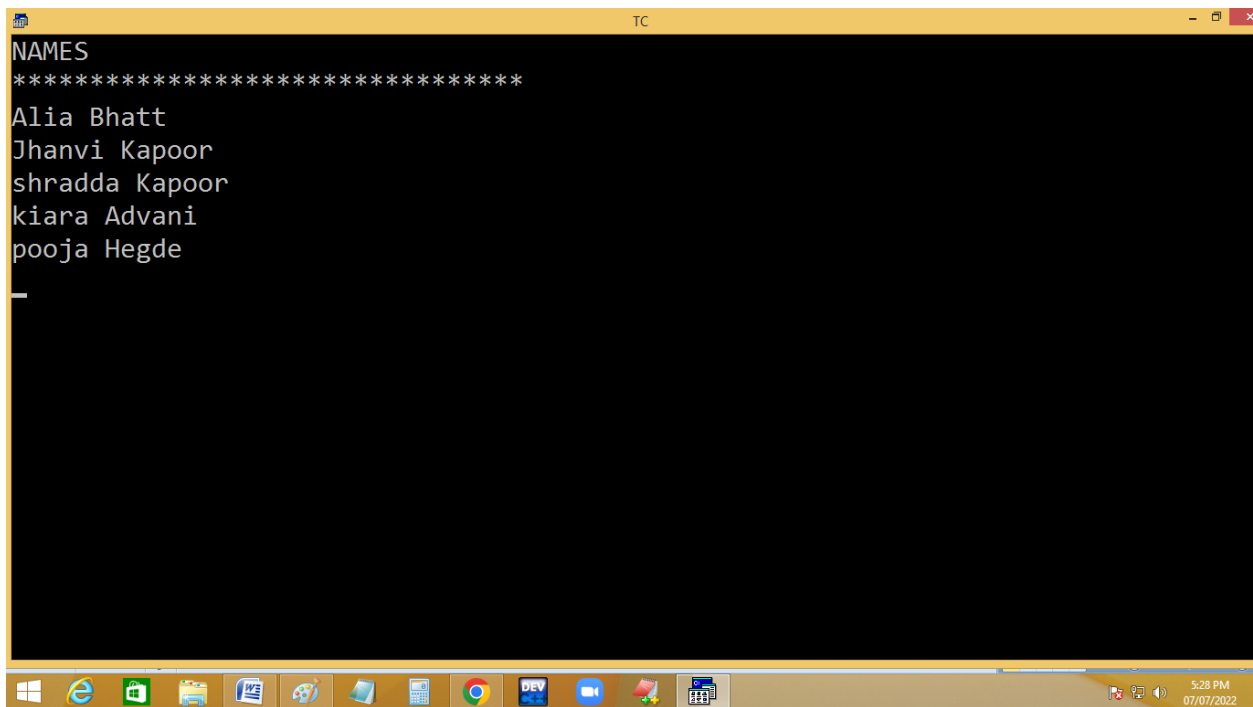
Storing of multiple strings:

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```c
#include<stdio.h>
#include<conio.h>
void main()
{
char s[5][20]={"Alia Bhatt","Jhanvi Kapoor","shradda Kapoor","kiara Advani","
int i;
clrscr();
puts("NAMES");
puts("*******************************");
for(i=0;i<5;i++)puts(s[i]);
getch();
}
```
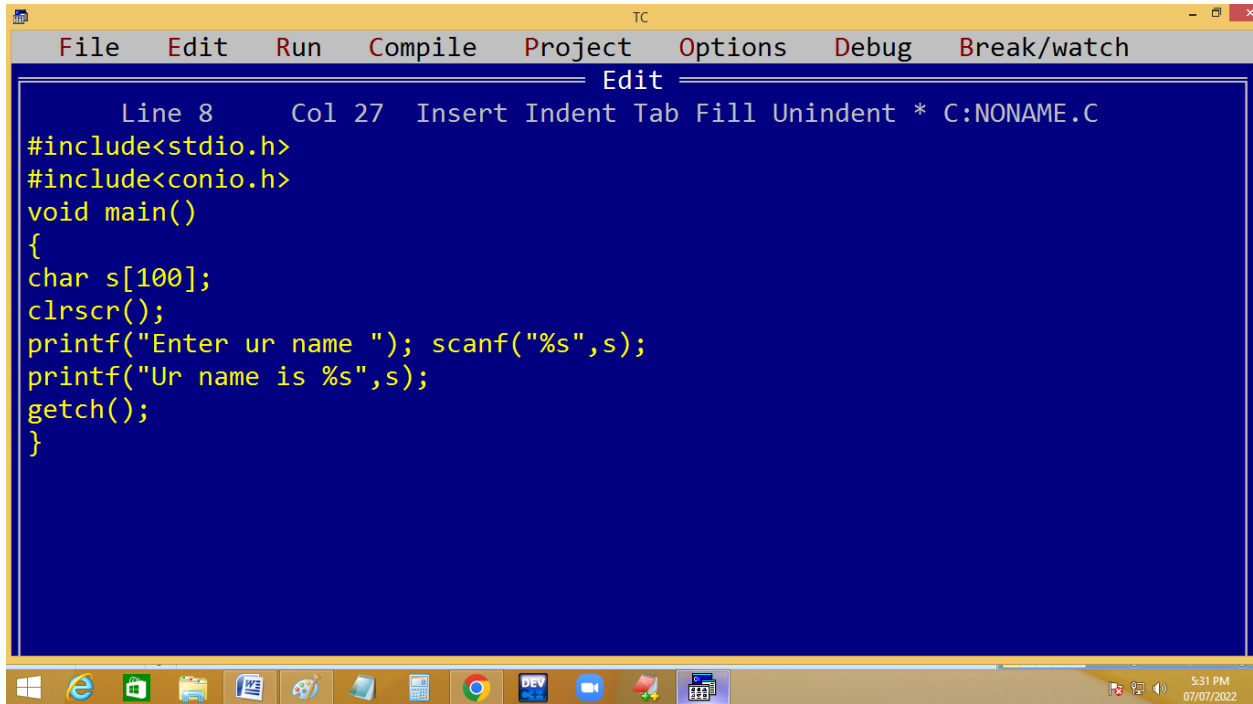
```
NAMES
*******************************
Alia Bhatt
Jhanvi Kapoor
shradda Kapoor
kiara Advani
pooja Hegde
_
```
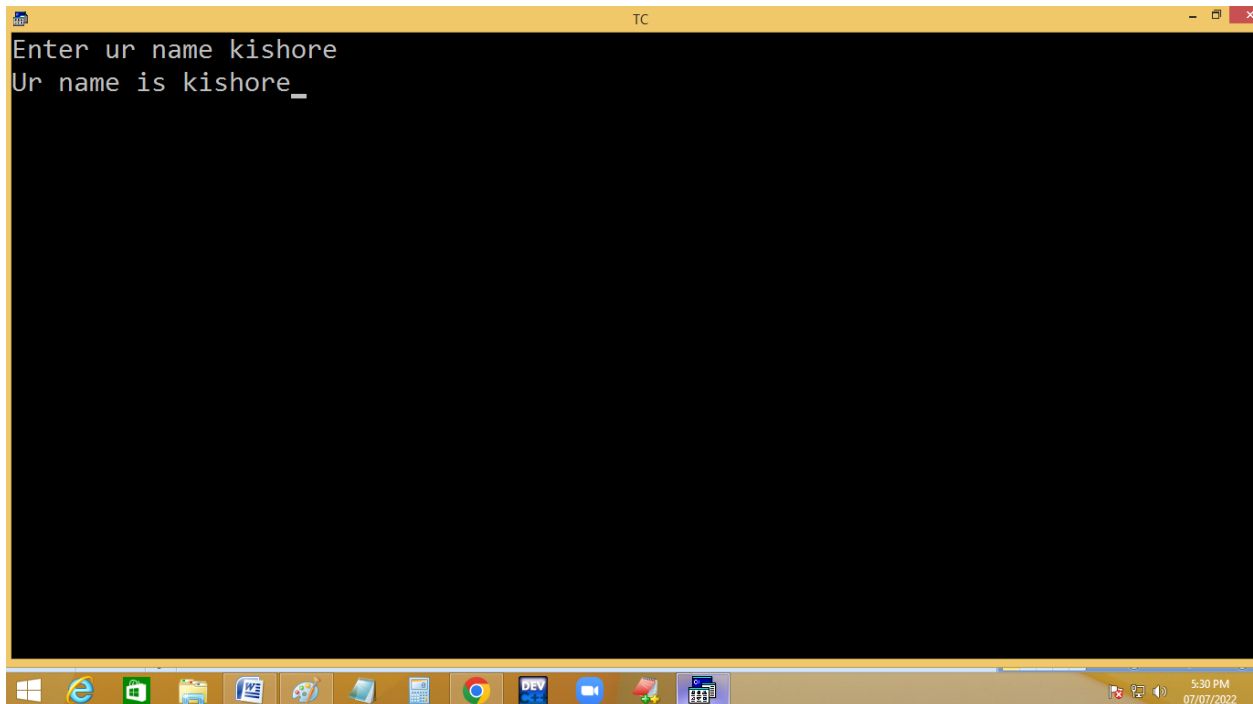
Eg. reading and printing string.

```
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#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
printf("Enter ur name "); scanf("%s",s);
printf("Ur name is %s",s);
getch();
}
```
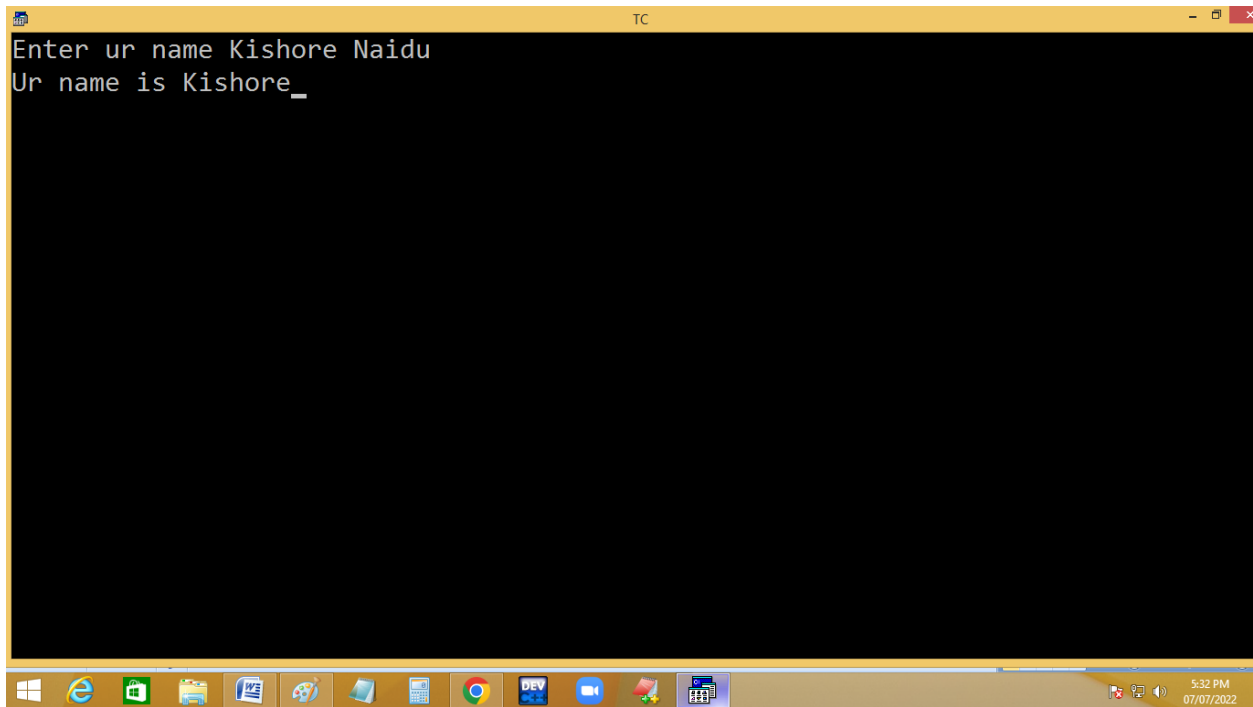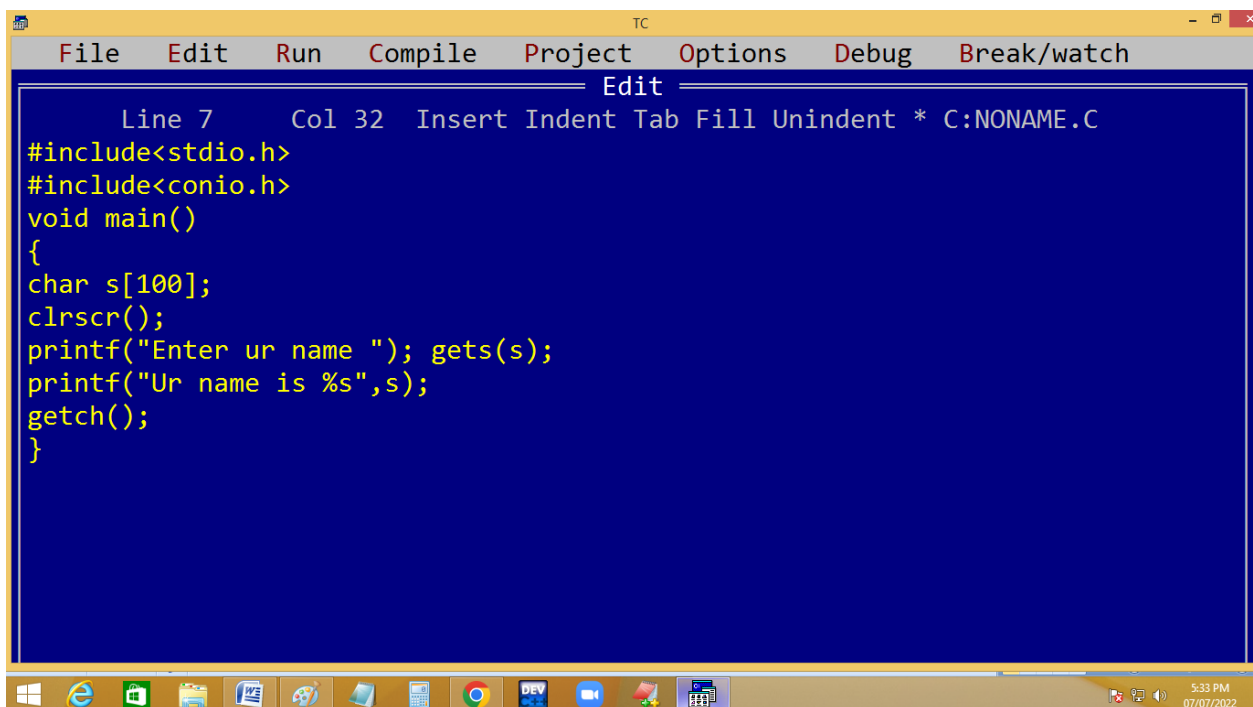
```
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Enter ur name kishore
Ur name is kishore_
```

```
Enter ur name Kishore Naidu
Ur name is Kishore_
```

```
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#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
printf("Enter ur name "); gets(s);
printf("Ur name is %s",s);
getch();
}
```
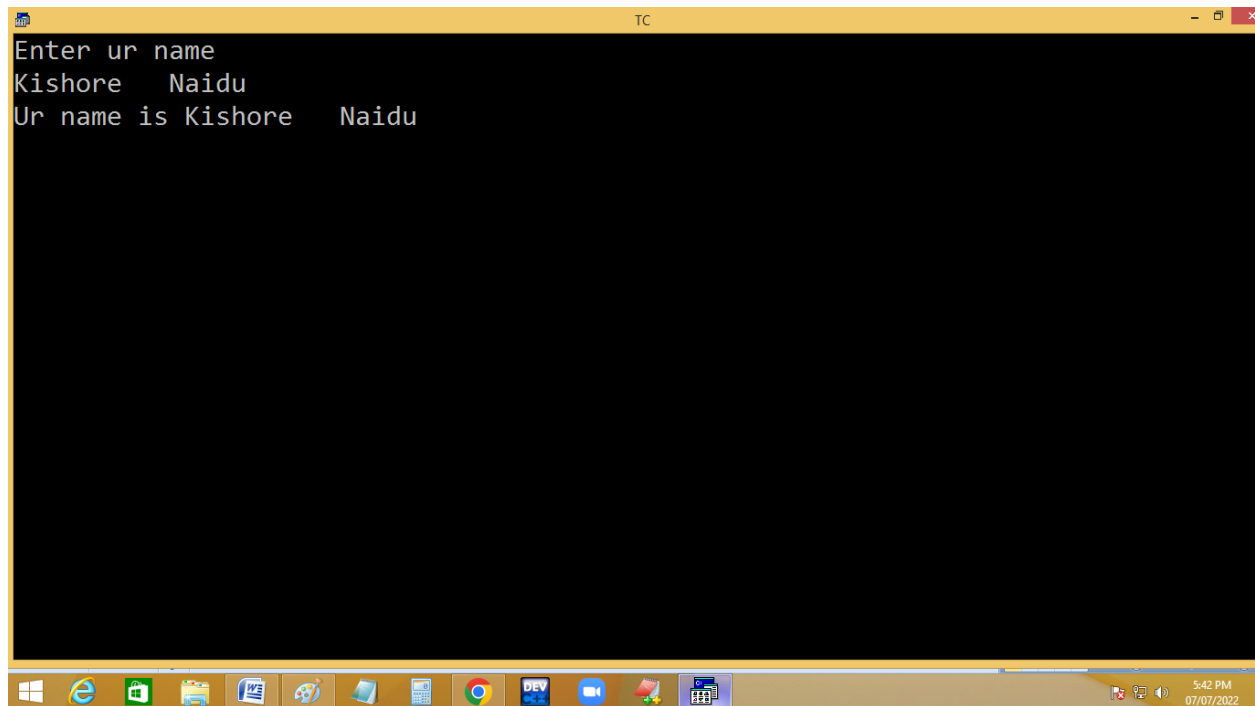
```
Enter ur name Kishore Naidu
Ur name is Kishore Naidu
```
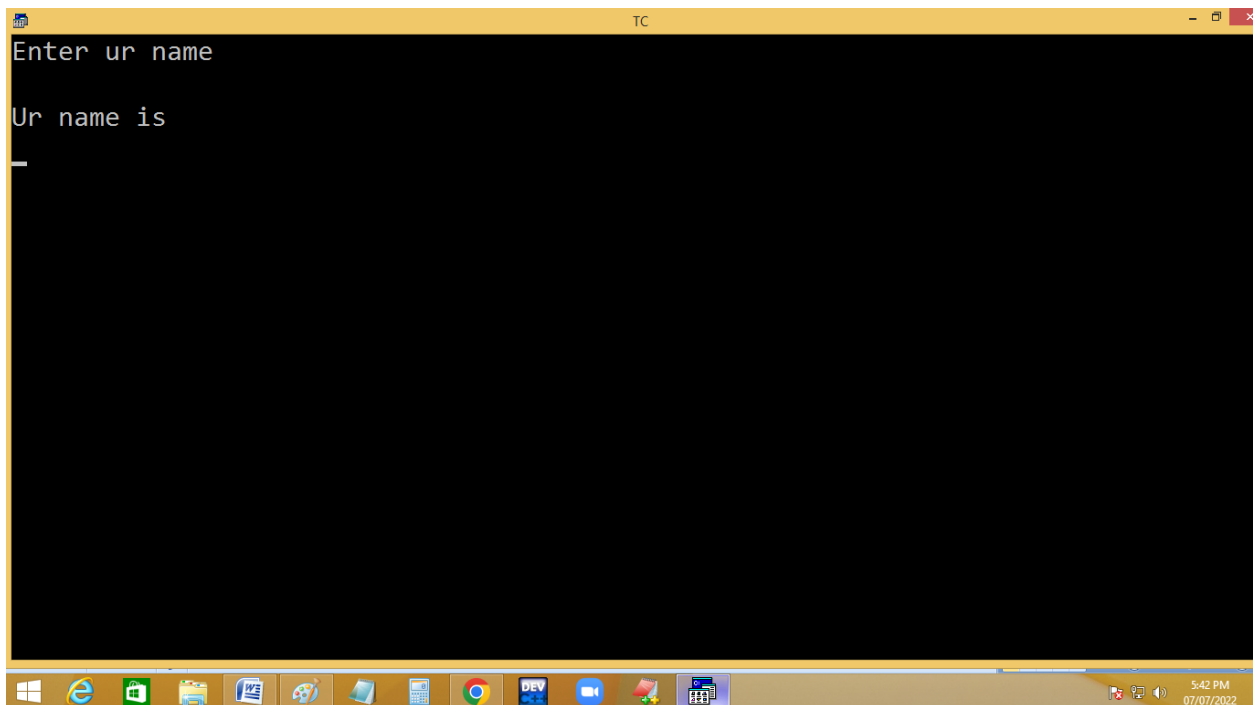
```
Enter ur name
Sachin Ramesh Tendulkar
Ur name is
Sachin Ramesh Tendulkar
```
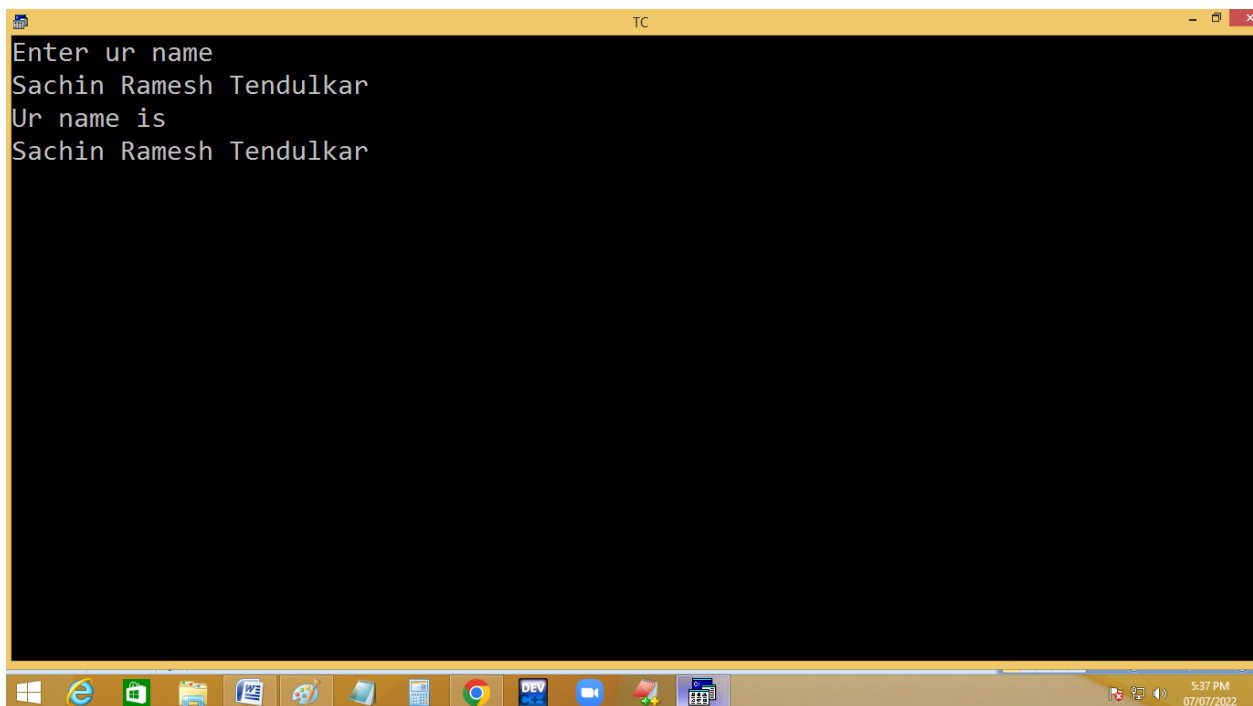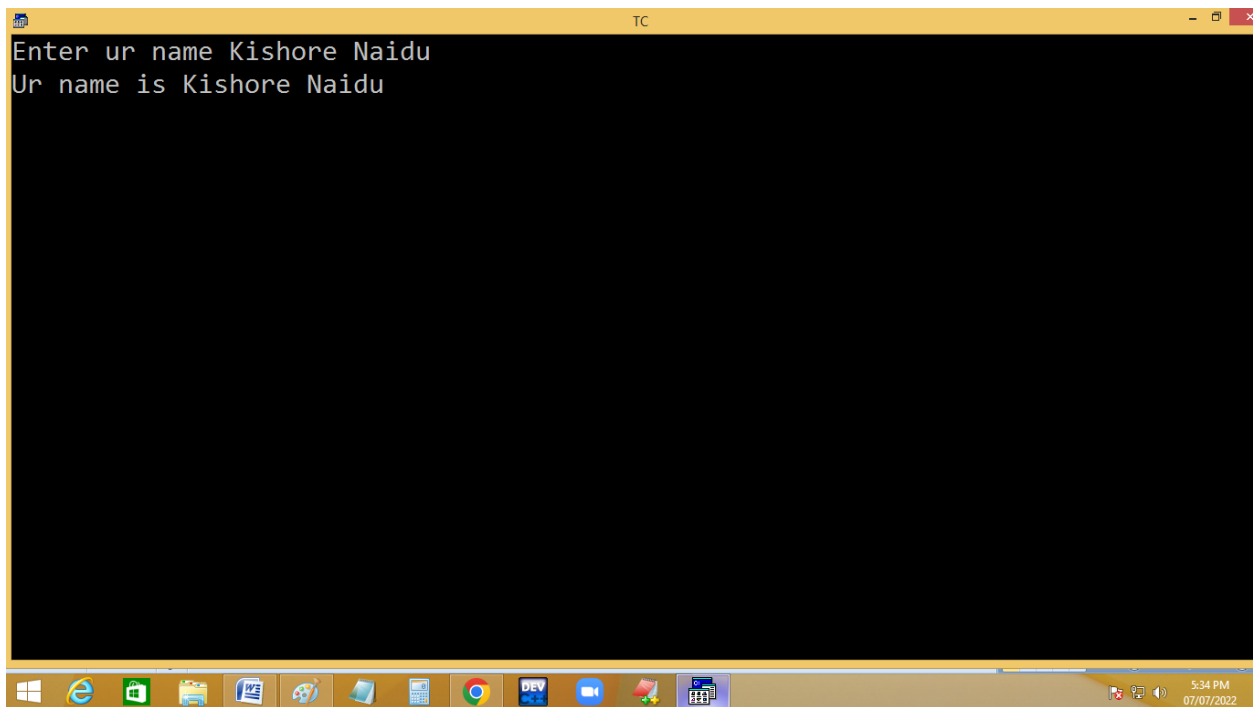
Scan set / magic characters:

```
                                    TC
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#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
puts("Enter ur name "); scanf("%[^\n]",s);
printf("Ur name is ");puts(s);
getch();
}
```
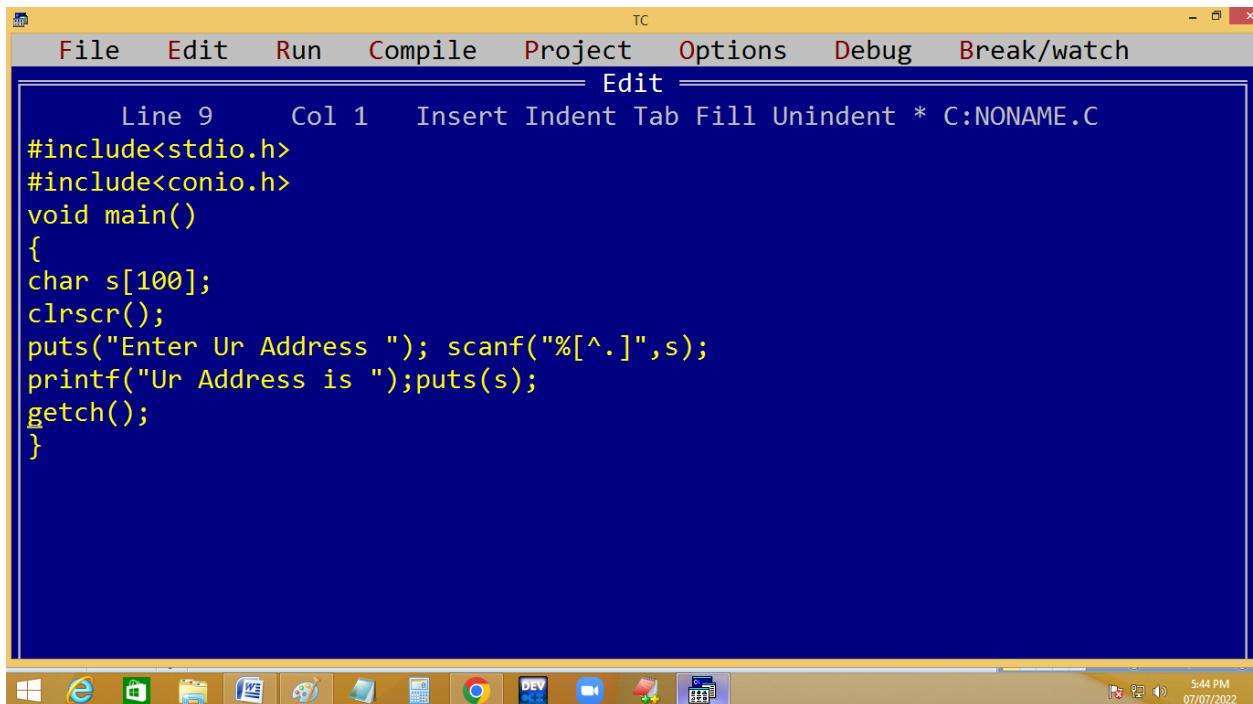
```
                                    TC
Enter ur name
Kishore    Naidu
Ur name is Kishore    Naidu
```

Enter ur name

Ur name is

File   Edit   Run   Compile   Project   Options   Debug   Break/watch

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```c
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
puts("Enter Ur Address "); scanf("%[^.]",s);
printf("Ur Address is ");puts(s);
getch();
}
```

```
Enter Ur Address
kishore
c/o Naresh it
ameerpet
Hyd
.
Ur Address is kishore
c/o Naresh it
ameerpet
Hyd

_
```
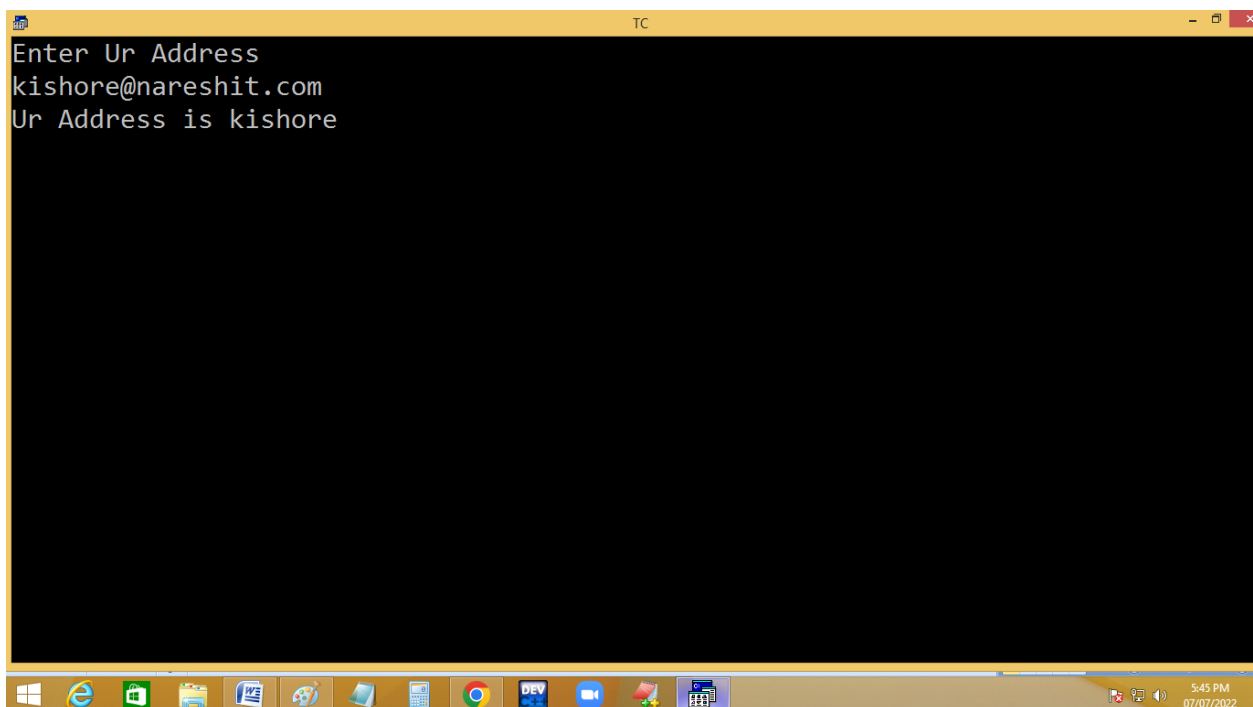
```
Enter Ur Address
Kishore
C/o. Naresh it
Ur Address is Kishore
C/o
```

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```c
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
puts("Enter Ur Address "); scanf("%[^#@&*$]",s);
printf("Ur Address is ");puts(s);
getch();
}
```
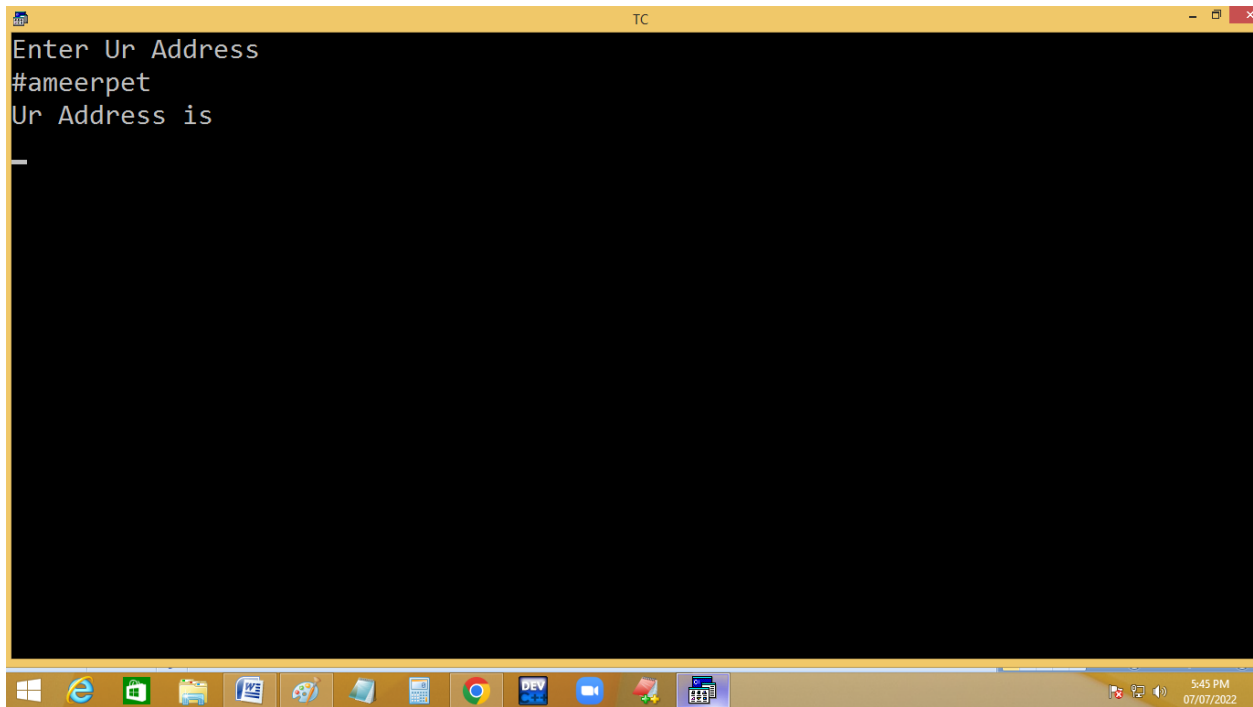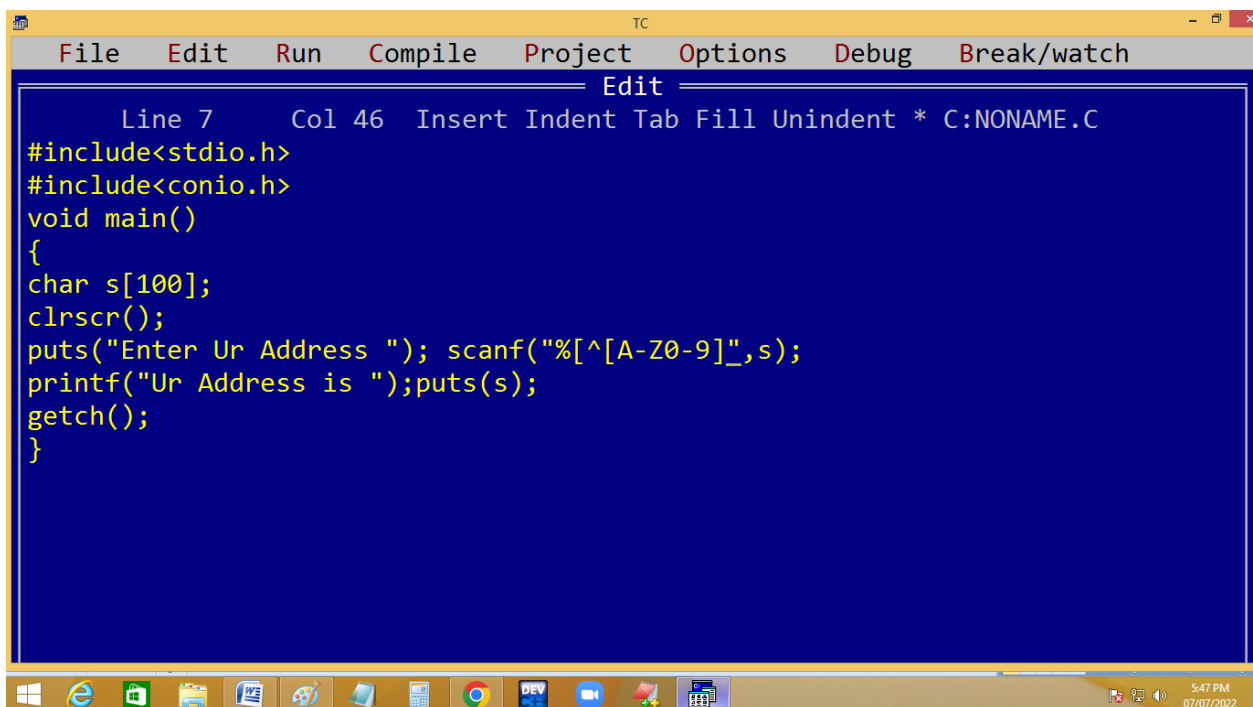

```
Enter Ur Address
kishore@nareshit.com
Ur Address is kishore
```
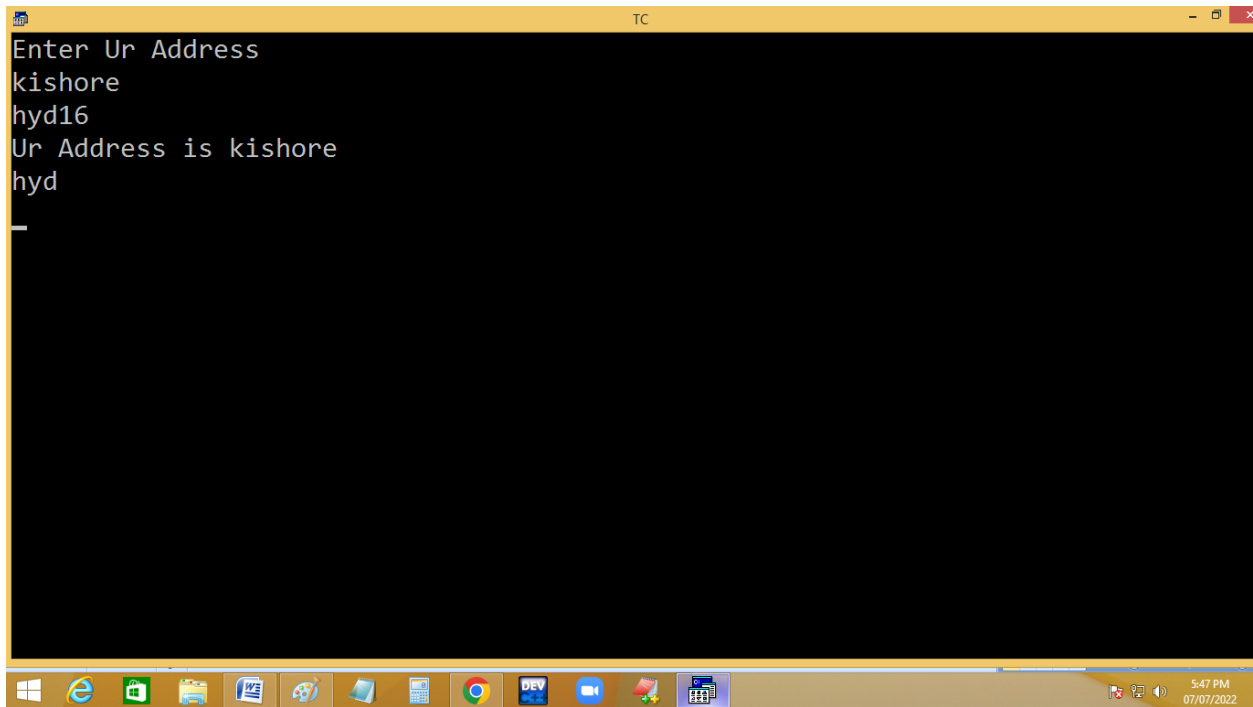
```
Enter Ur Address
#ameerpet
Ur Address is
_
```

```
 File    Edit    Run    Compile    Project    Options    Debug    Break/watch
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     Line 7    Col 46   Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
puts("Enter Ur Address "); scanf("%[^[A-Z0-9]",s);
printf("Ur Address is ");puts(s);
getch();
}
```

```
Enter Ur Address
kishore
hyd16
Ur Address is kishore
hyd
_
```

TC

```
Edit
    Line 7    Col 42   Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
puts("Enter Ur Address "); scanf("%[[A-Z 0-9]",s);
printf("Ur Address is ");puts(s);
getch();
}
```

```
Enter Ur Address
James Bond 007
Ur Address is J
```

```
Enter Ur Address
KIShore-16
Ur Address is KIS
```