

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.

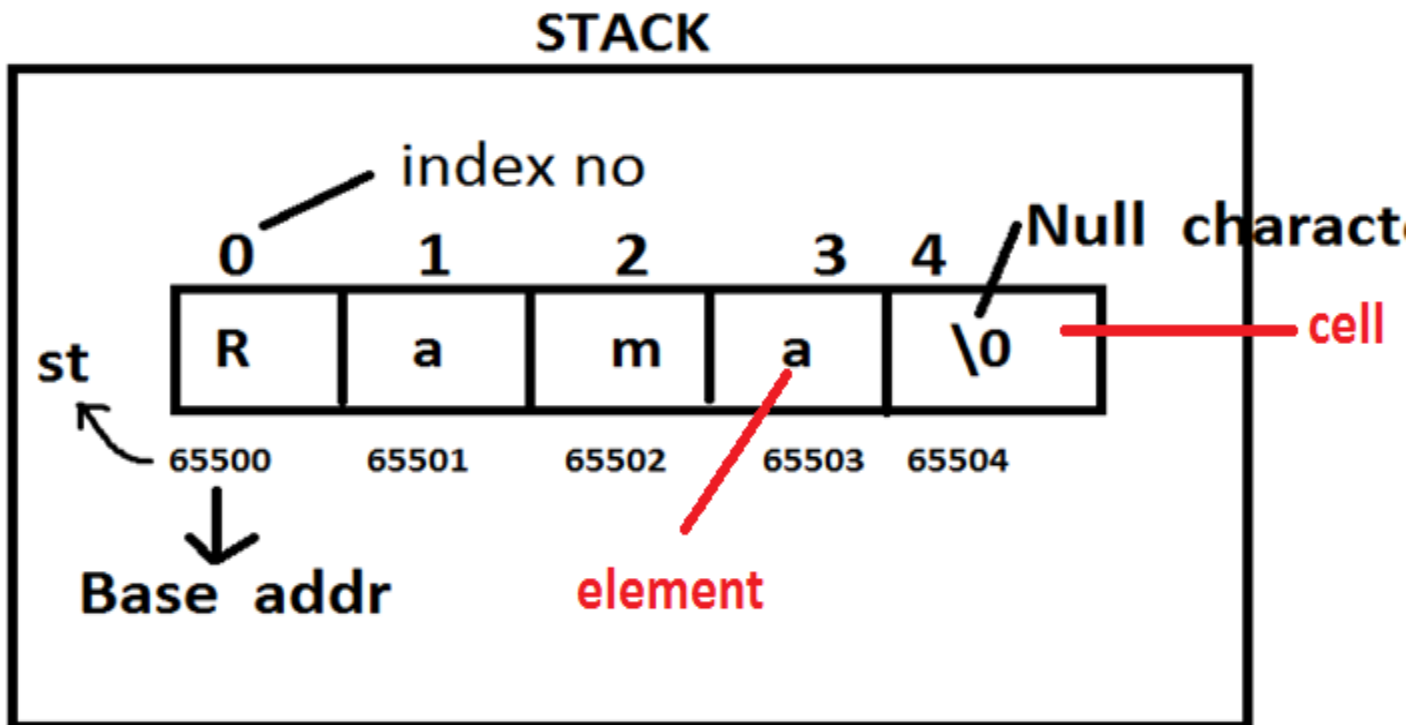
Syntax:

`char variable [size] = "string";`

or

`char variable[]="string";`

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



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;`

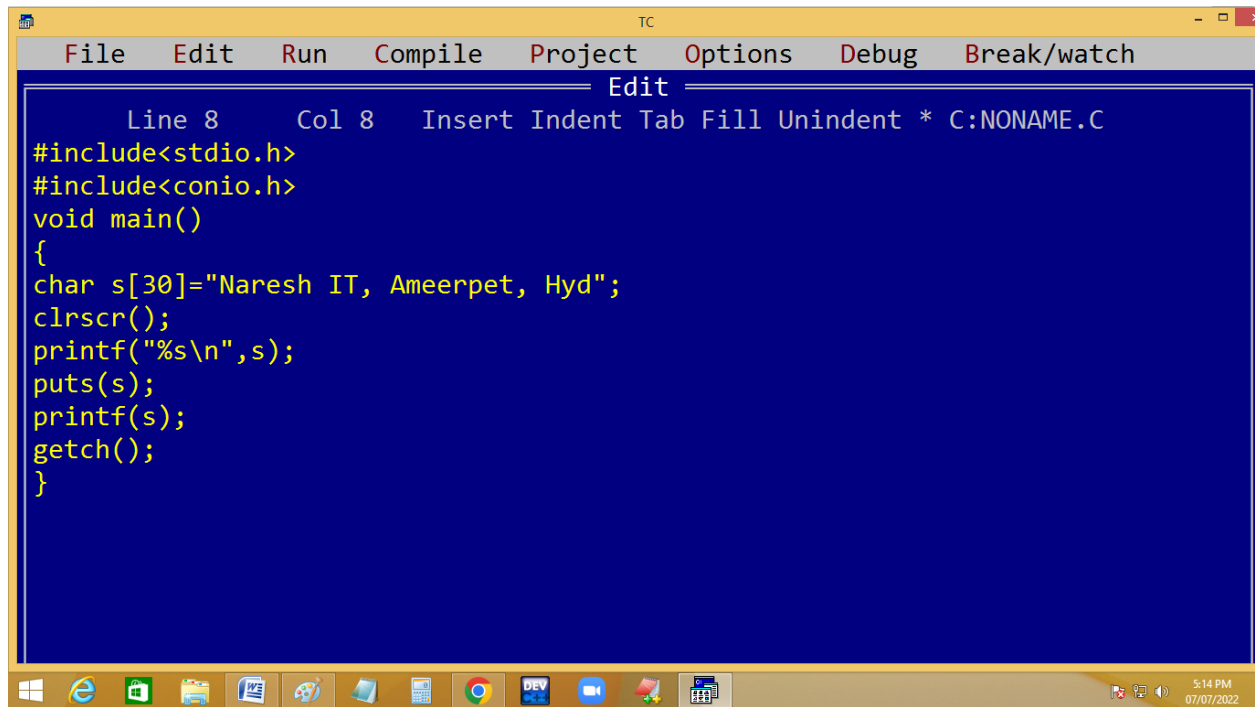
`char st[n];` No

`#define n 20`

`char st[n];` Ok

Note: String variable size always constant positive integer value.

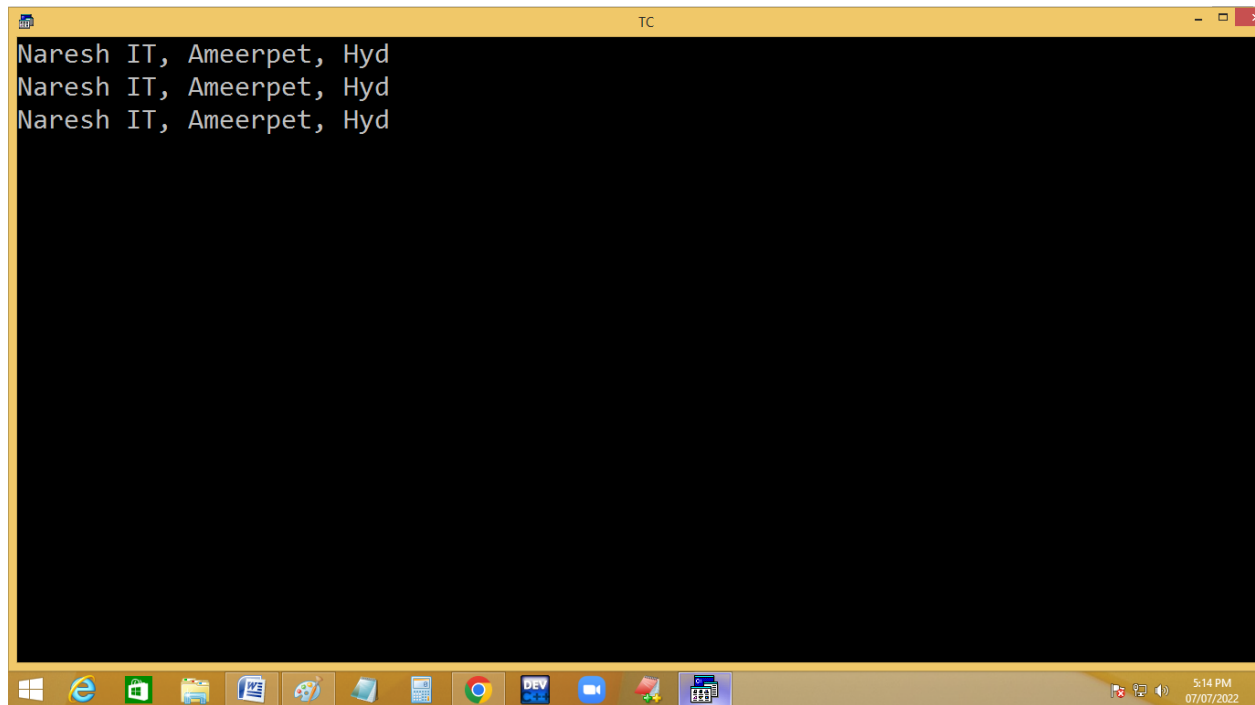
Eg: Direct initialization of a string



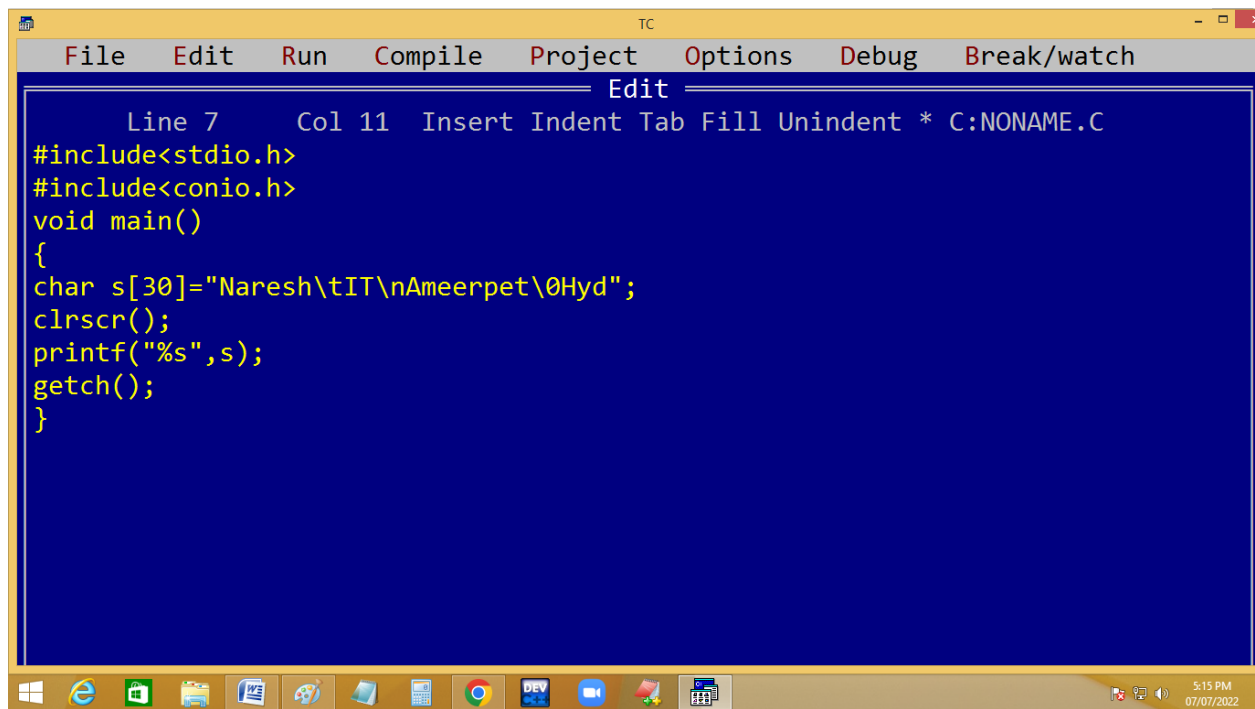
The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar and a menu bar containing File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The 'Edit' menu is open, showing options like Line 8, Col 8, Insert, Indent, Tab, Fill, Unindent, and * C:\NONAME.C. The main editing area has a blue background and contains the following C code:

```
#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();
}
```

The Windows taskbar at the bottom shows various application icons and the system clock indicating 5:14 PM on 07/07/2022.



The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar. The main editing area has a black background and displays the output of the program, which is the string "Naresh IT, Ameerpet, Hyd" printed three times on separate lines. The Windows taskbar at the bottom is identical to the first screenshot, showing the same application icons and system clock.



TC

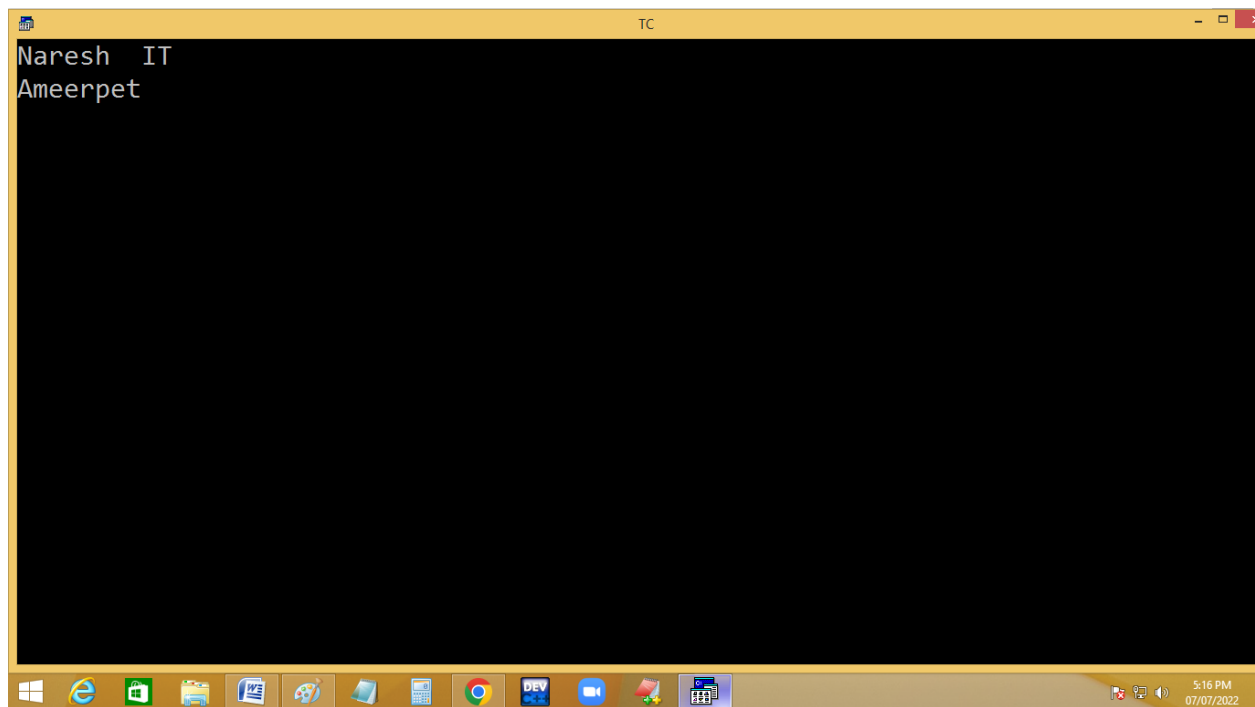
File Edit Run Compile Project Options Debug Break/watch

Edit

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

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

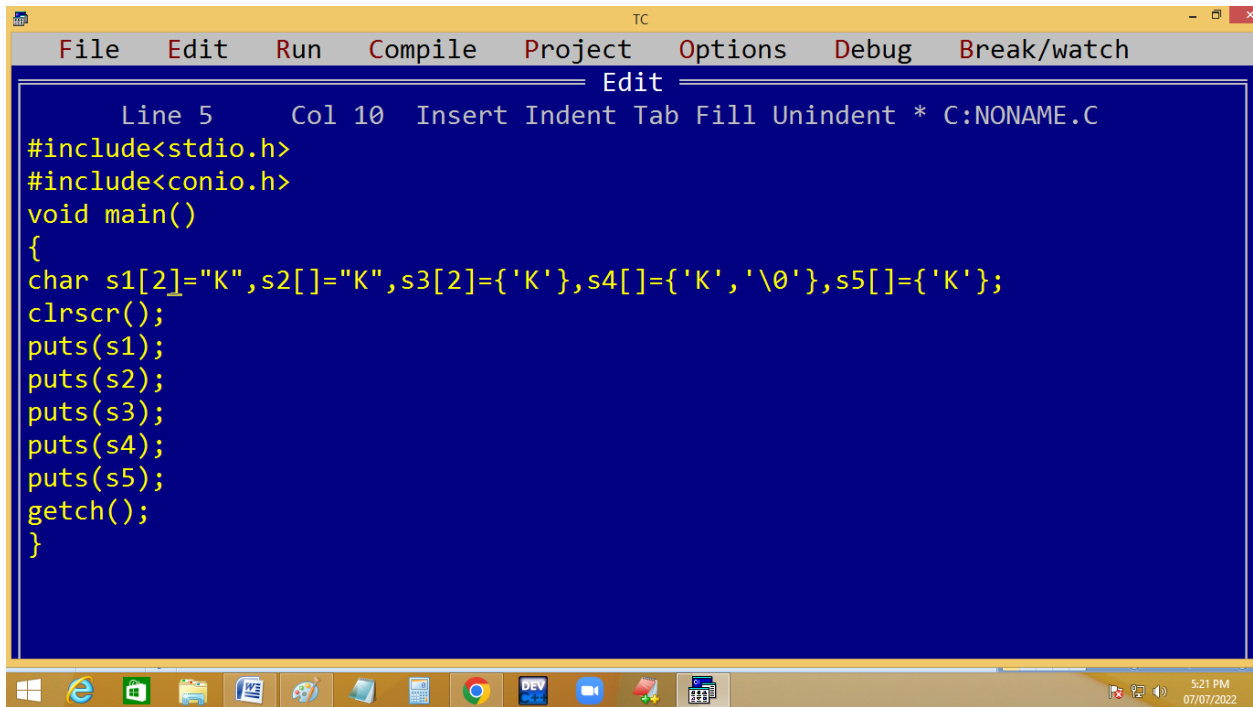
Windows taskbar with icons for File Explorer, Edge, Word, PowerPoint, Paint, Calculator, Chrome, DevTools, Teams, and a folder icon. System tray shows the date and time: 5:15 PM 07/07/2022.



TC

Naresh IT
Ameerpet

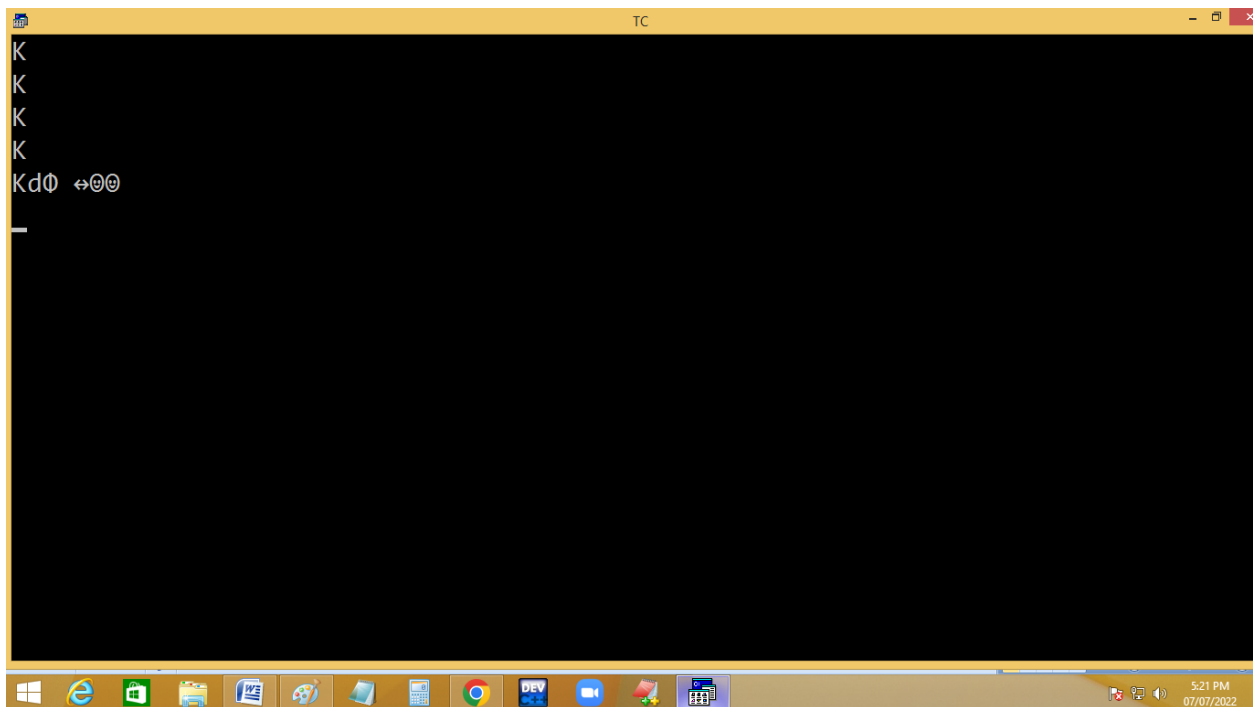
Windows taskbar with icons for File Explorer, Edge, Word, PowerPoint, Paint, Calculator, Chrome, DevTools, Teams, and a folder icon. System tray shows the date and time: 5:16 PM 07/07/2022.



The screenshot shows the Turbo C++ IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a toolbar. The main window is titled 'Edit' and shows a C program for storing multiple strings. The code is as follows:

```
Line 5      Col 10  Insert Indent Tab Fill Unindent * C:NONAME.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();
}
```

The Windows taskbar at the bottom shows various icons including the Start button, Internet Explorer, Word, and the system clock indicating 5:21 PM on 07/07/2022.

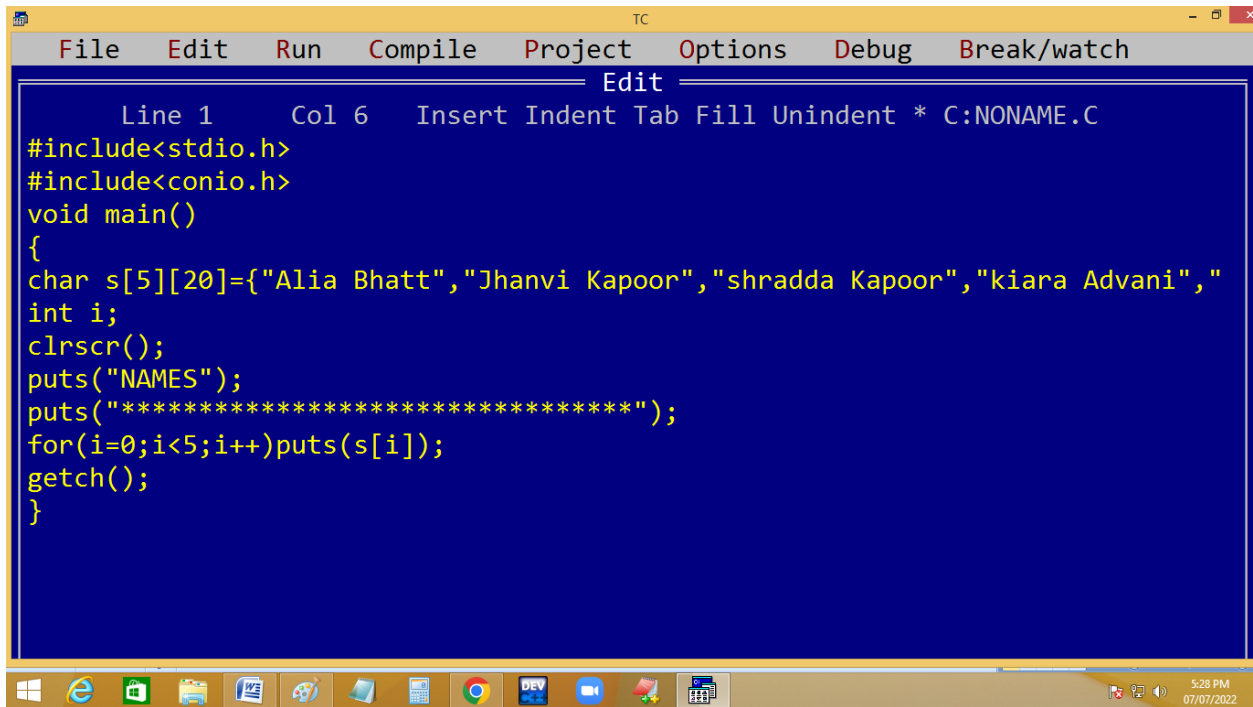


The screenshot shows the Turbo C++ IDE with the same menu bar and toolbar. The main window is titled 'TC' and shows the output of the program. The output is as follows:

```
K
K
K
K
Kd  ↵↵↵
_
```

The Windows taskbar at the bottom shows various icons including the Start button, Internet Explorer, Word, and the system clock indicating 5:21 PM on 07/07/2022.

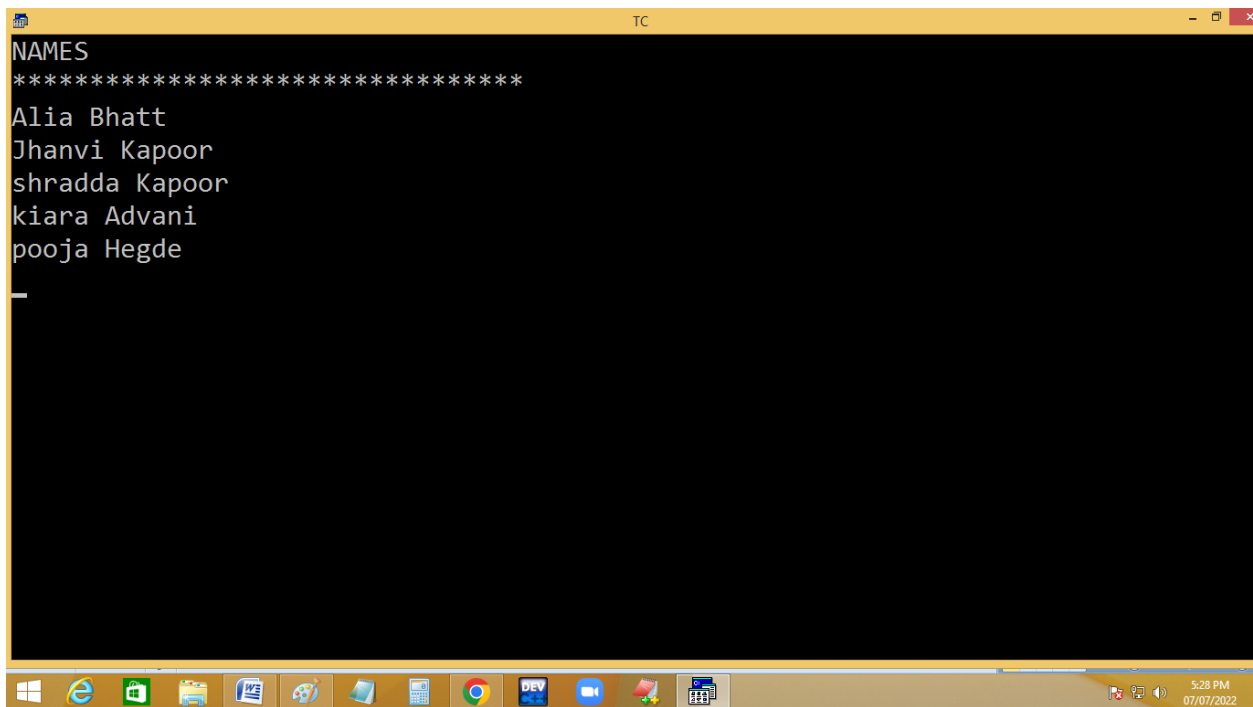
Storing of multiple strings:



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a toolbar. The main window is titled 'Edit' and shows a C program in a blue editor. The code is as follows:

```
Line 1    Col 6    Insert Indent Tab Fill Unindent * C:NONAME.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();
}
```

The Windows taskbar at the bottom shows various application icons and the system clock indicating 5:28 PM on 07/07/2022.

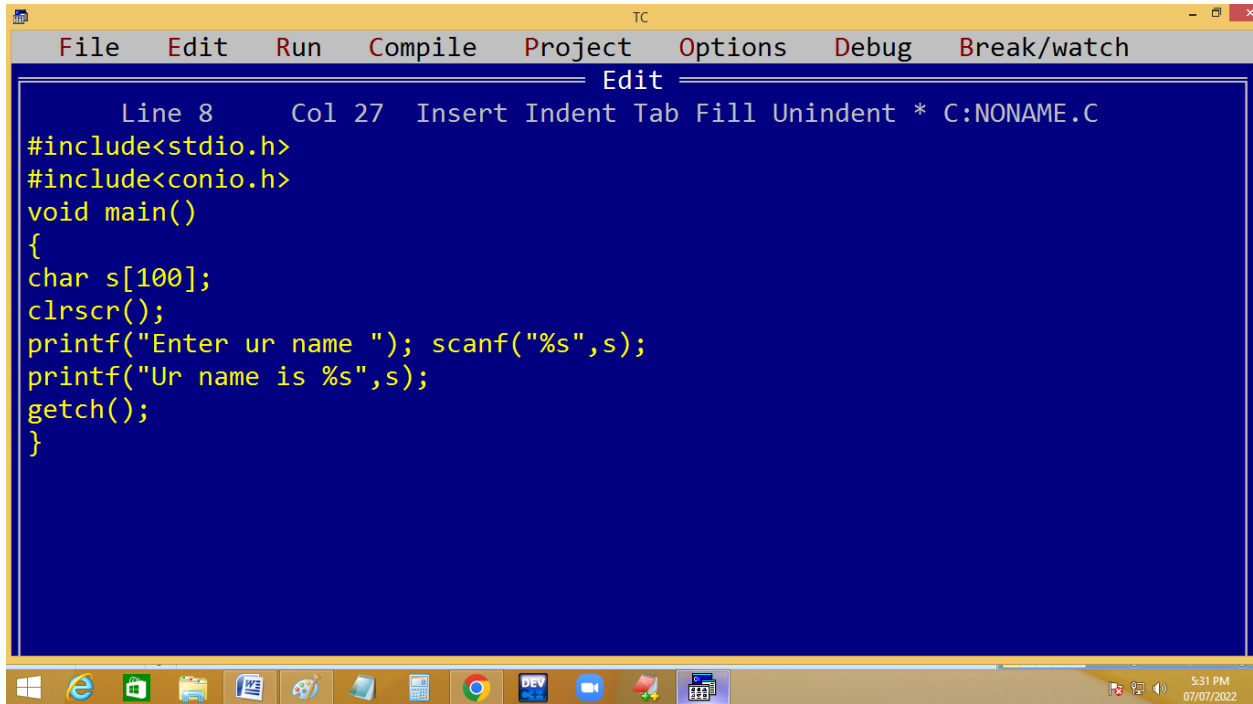


The screenshot shows the Turbo C++ (TC) IDE with the same menu bar and toolbar. The main window now displays the output of the program in a black editor. The output is as follows:

```
NAMES
*****
Alia Bhatt
Jhanvi Kapoor
shradda Kapoor
kiara Advani
pooja Hegde
_
```

The Windows taskbar at the bottom remains the same, showing the system clock at 5:28 PM on 07/07/2022.

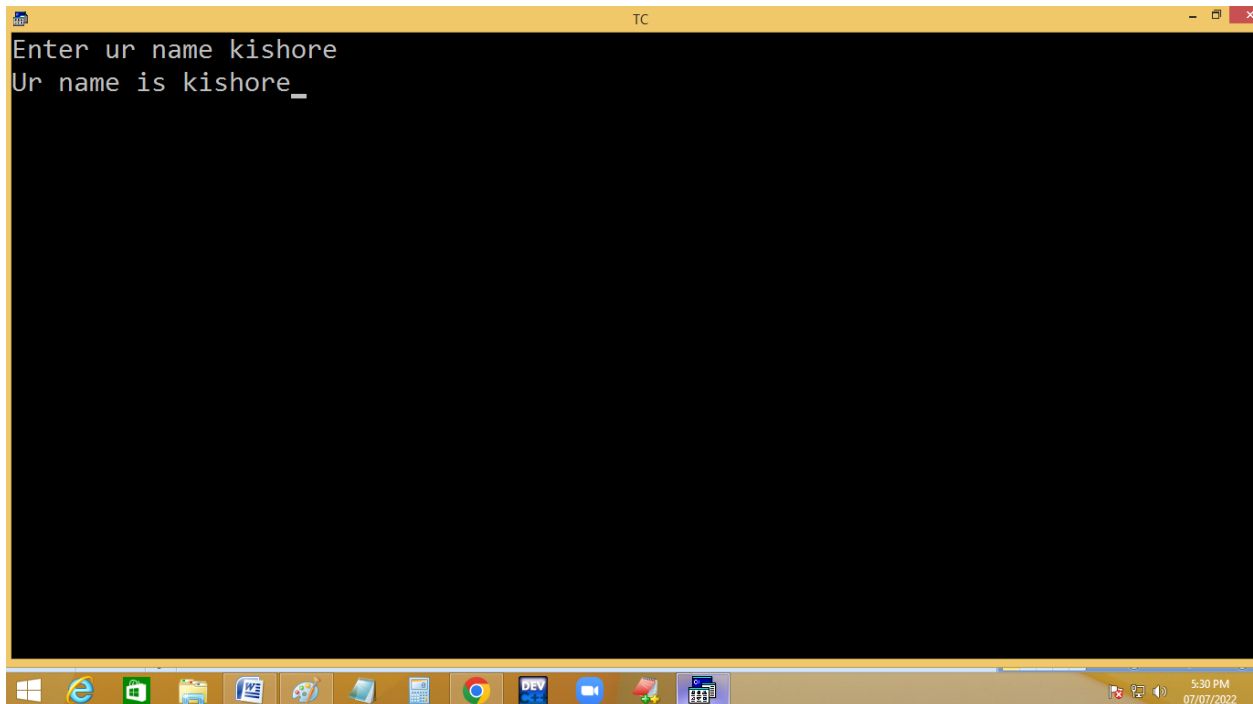
Eg. reading and printing string.



The screenshot shows the Turbo C++ IDE with the following code in the editor window:

```
Line 8      Col 27  Insert Indent Tab Fill Unindent * C:\NONAME.C
#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();
}
```

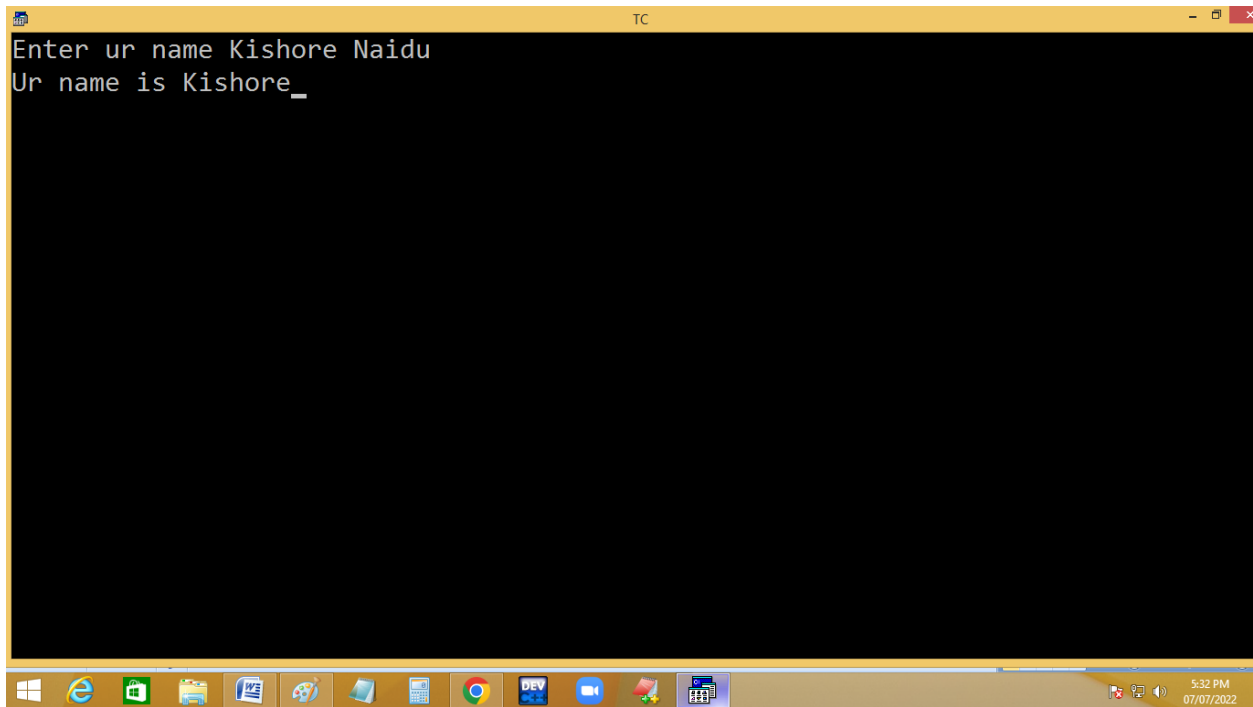
The IDE interface includes a menu bar with File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the bottom shows the time as 5:31 PM on 07/07/2022.



The screenshot shows the Turbo C++ IDE with the following output in the console window:

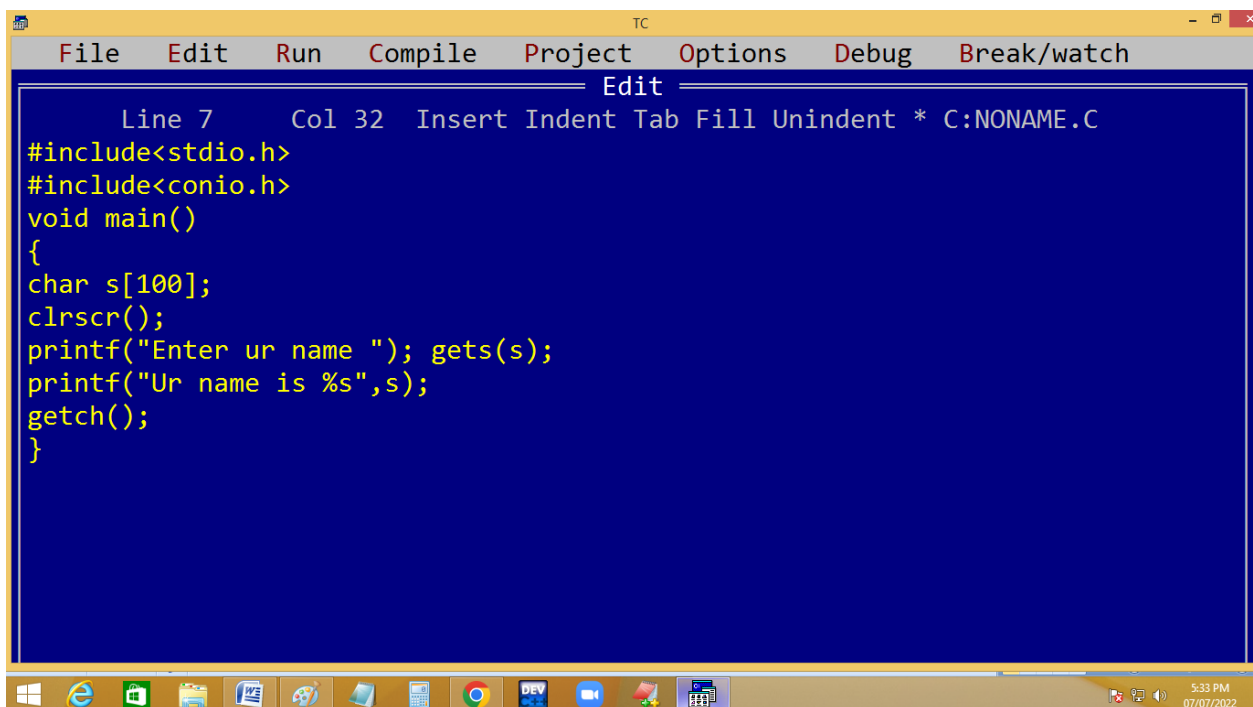
```
Enter ur name kishore
Ur name is kishore_
```

The IDE interface includes a menu bar with File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the bottom shows the time as 5:30 PM on 07/07/2022.



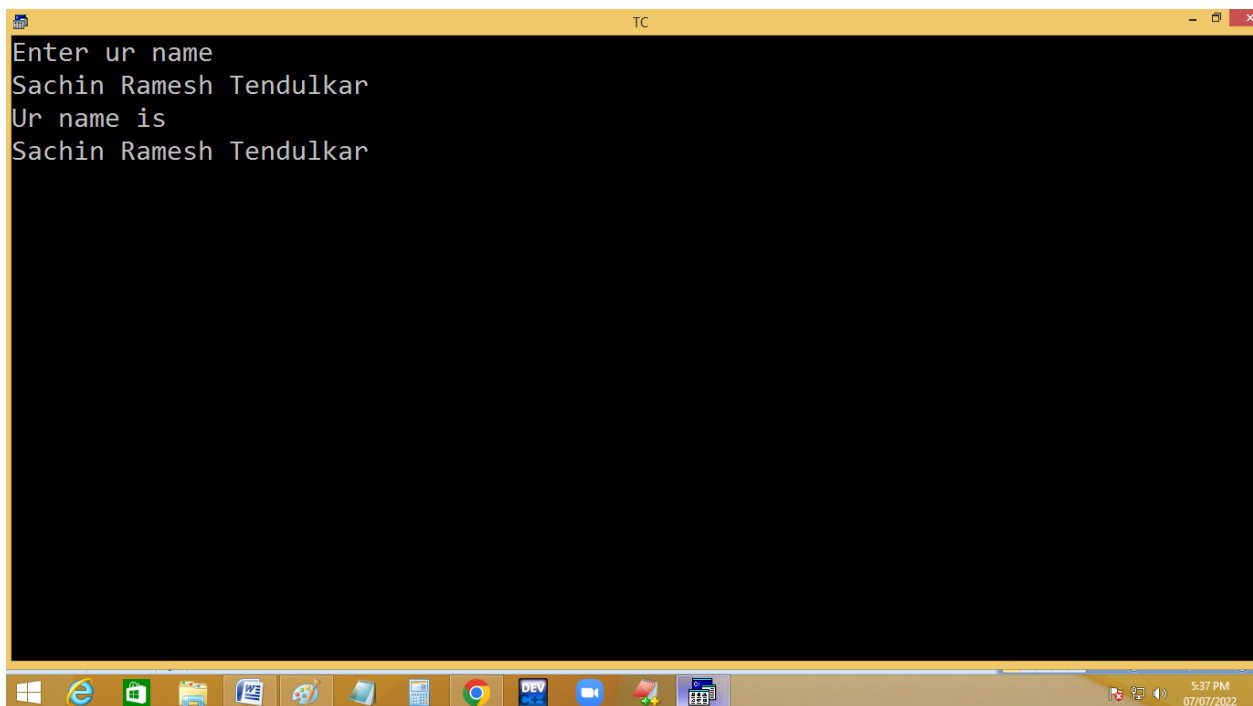
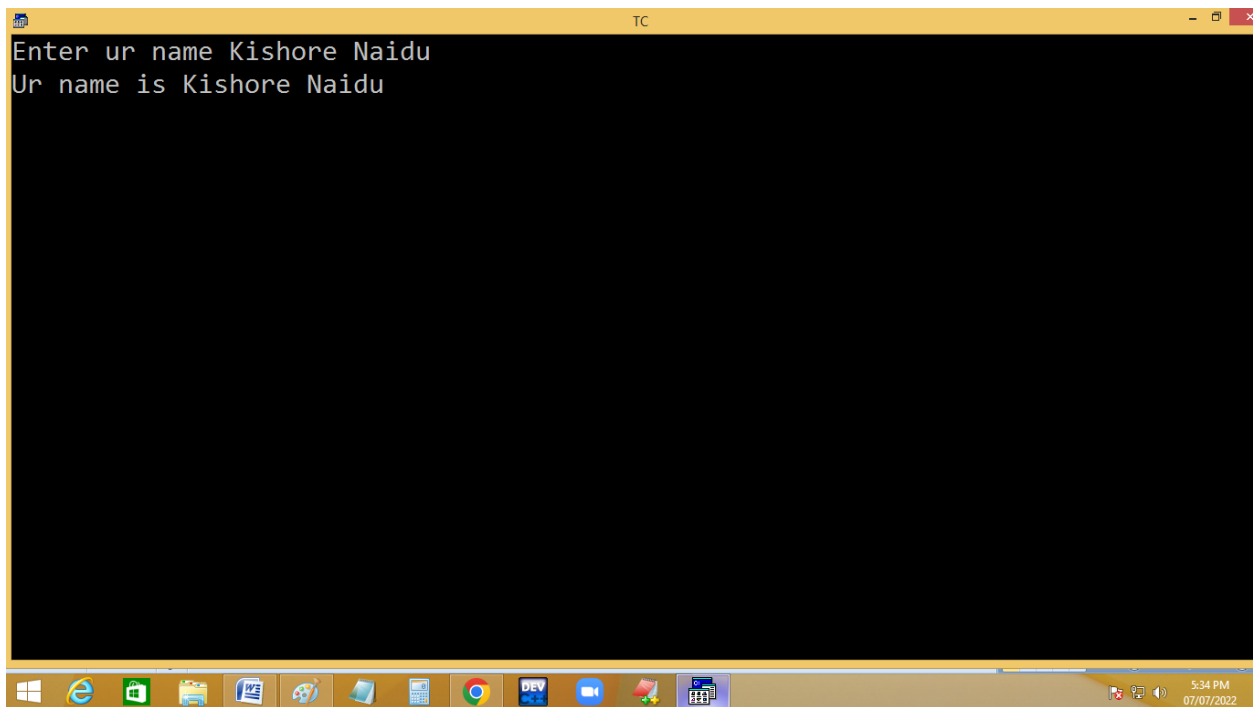
A screenshot of a Turbo C++ (TC) console window. The window has a yellow title bar with the text "TC" and standard window controls. The black console area displays the text "Enter ur name Kishore Naidu" on the first line and "Ur name is Kishore_" on the second line. The Windows taskbar is visible at the bottom, showing icons for various applications and the system clock indicating 5:32 PM on 07/07/2022.

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

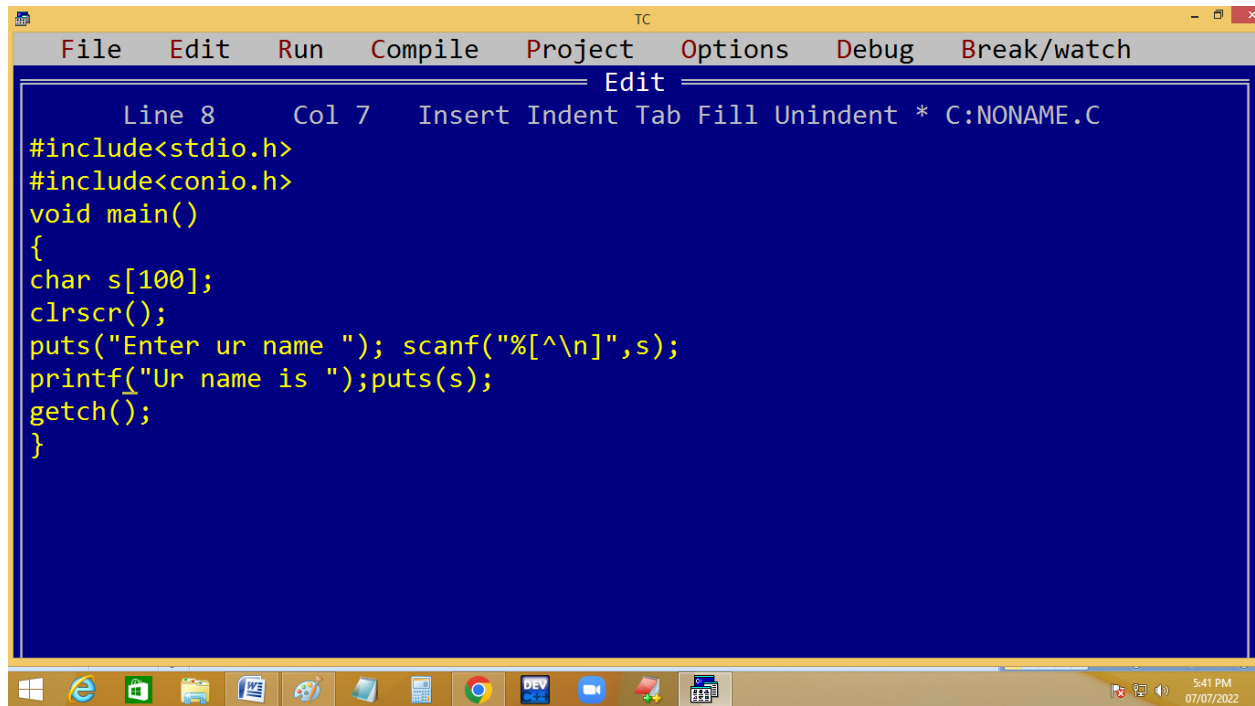


A screenshot of the Turbo C++ (TC) source code editor. The window has a yellow title bar with "TC" and standard window controls. Below the title bar is a menu bar with options: File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The editor area has a blue background and shows the following C code: `#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();`, and `}`. The status bar at the bottom of the editor shows "Line 7 Col 32 Insert Indent Tab Fill Unindent * C:NONAME.C". The Windows taskbar is visible at the bottom, showing icons for various applications and the system clock indicating 5:33 PM on 07/07/2022.

```
TC
File Edit Run Compile Project Options Debug Break/watch
Edit
Line 7 Col 32 Insert Indent Tab Fill Unindent * C:NONAME.C
#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();
}
```

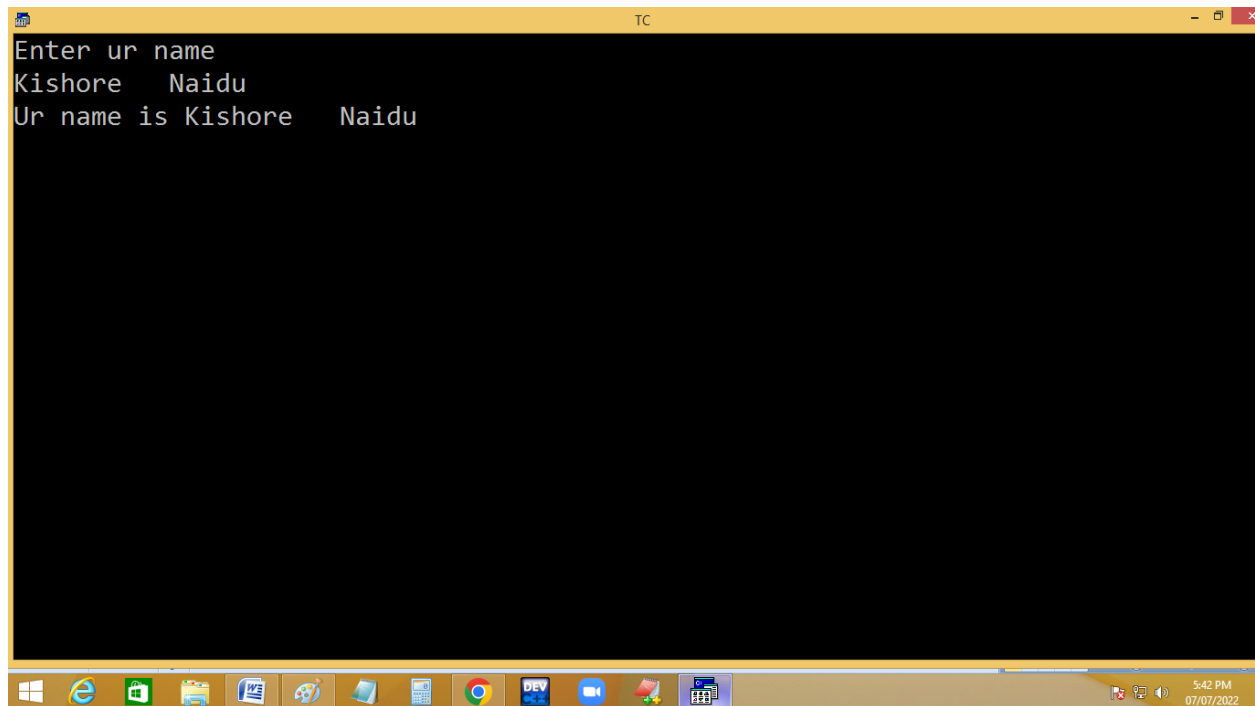


Scan set / magic characters:



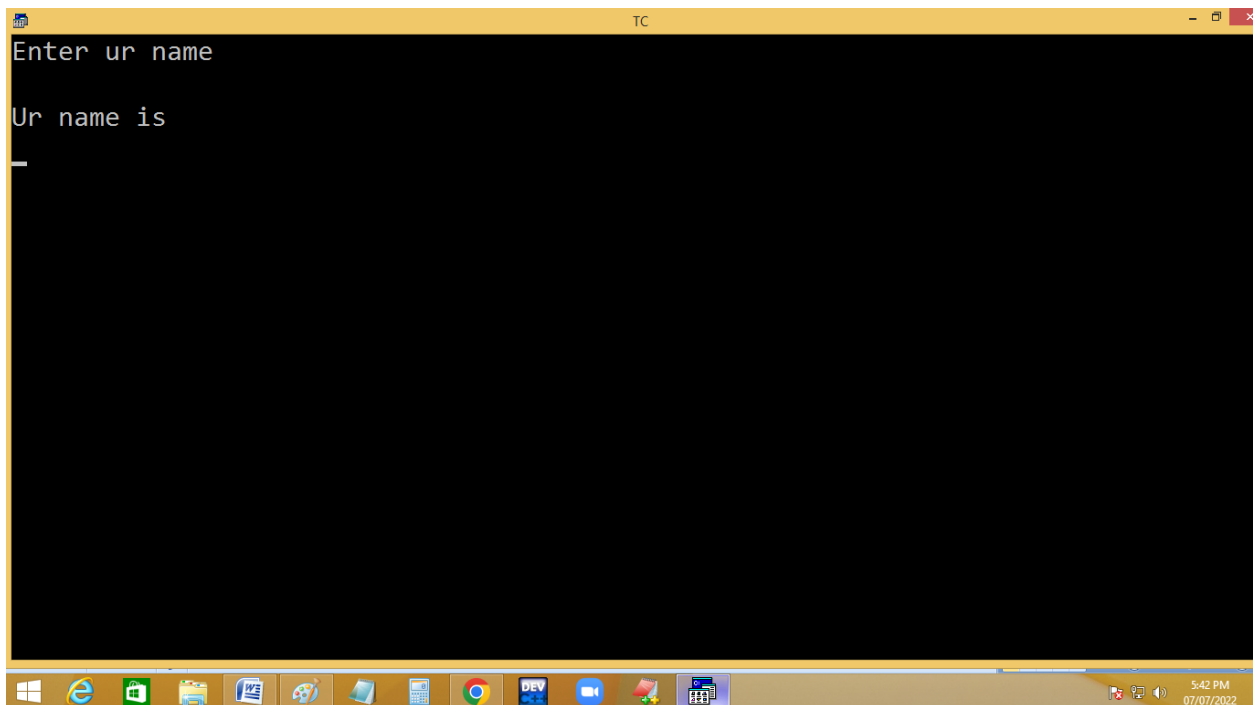
The screenshot shows the Turbo C++ IDE with the following code in the editor:

```
Line 8   Col 7   Insert Indent Tab Fill Unindent * C:NONAME.C
#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();
}
```



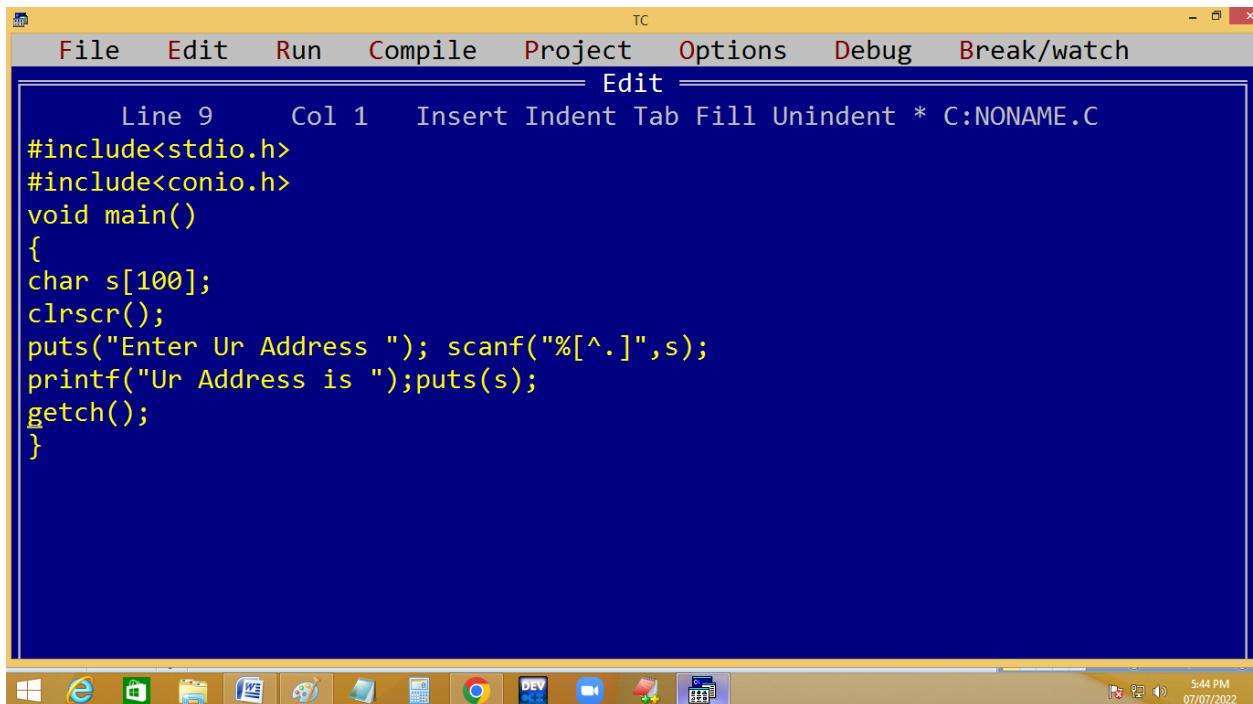
The screenshot shows the Turbo C++ IDE with the following output in the console:

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



The screenshot shows a Turbo C++ (TC) console window. The title bar is yellow and contains the text "TC". The main area is black with white text. The first line of text is "Enter ur name". The second line is "Ur name is", followed by a white cursor line. The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 5:42 PM on 07/07/2022.

```
TC
Enter ur name
Ur name is
_
```



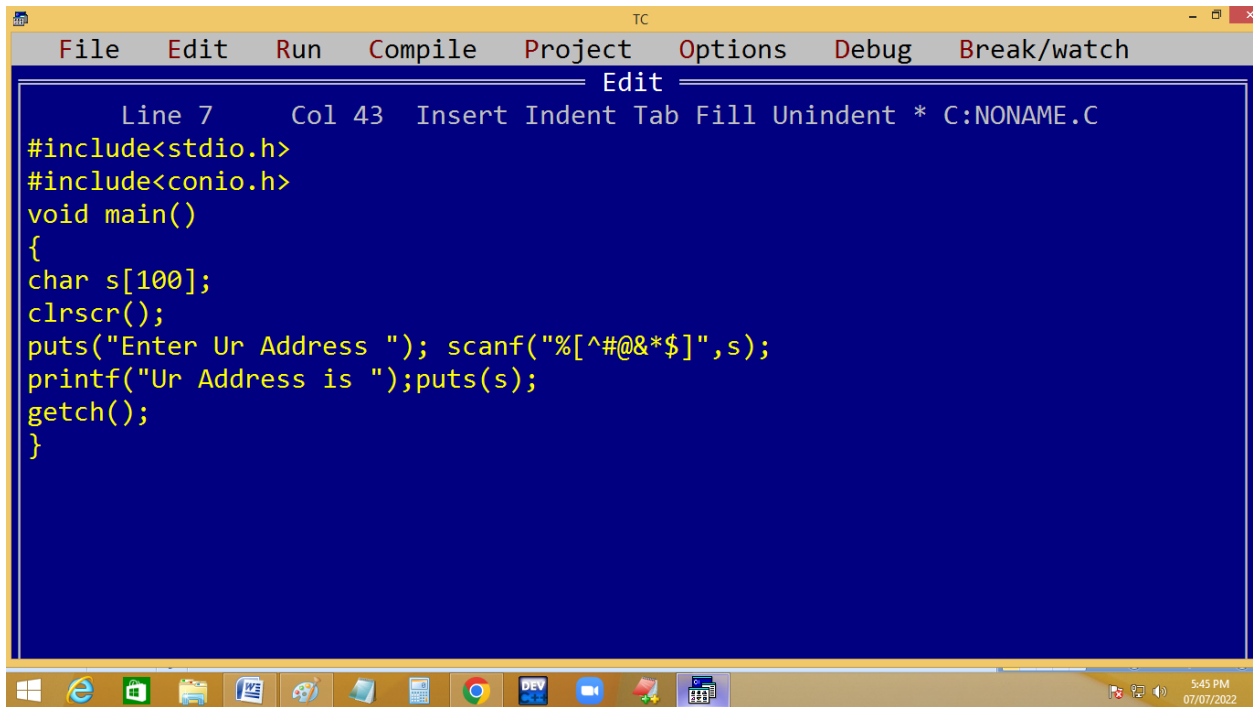
The screenshot shows the Turbo C++ (TC) source code editor. The title bar is yellow and contains the text "TC". The menu bar is grey and contains the following items: File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The main area is blue with yellow text. The code is as follows:

```
TC
File Edit Run Compile Project Options Debug Break/watch
Edit
Line 9 Col 1 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("%[^.]",s);
printf("Ur Address is ");puts(s);
getch();
}
```

The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 5:44 PM on 07/07/2022.

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

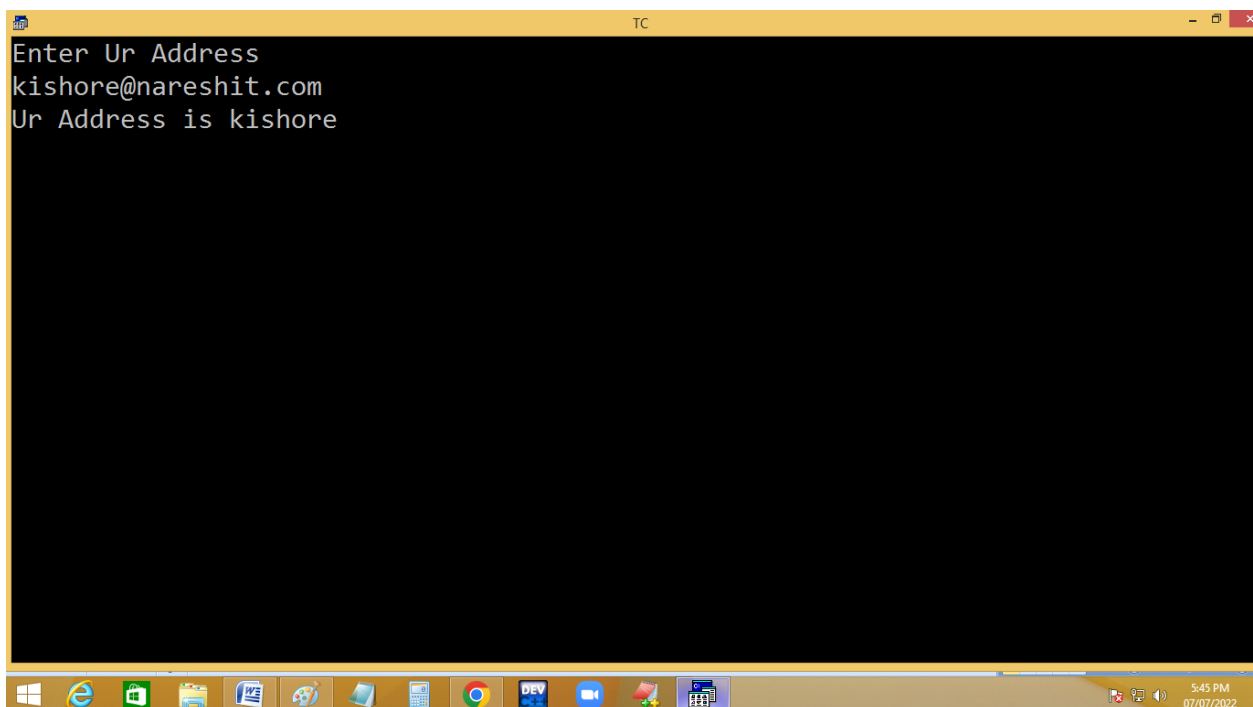
```
TC
Enter Ur Address
Kishore
C/o. Naresh it
Ur Address is Kishore
C/o
```



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a toolbar. The main window is titled "Edit" and shows a C program in a file named "C:NONAME.C". The code is as follows:

```
Line 7      Col 43  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("%[^#@&*$]",s);
printf("Ur Address is ");puts(s);
getch();
}
```

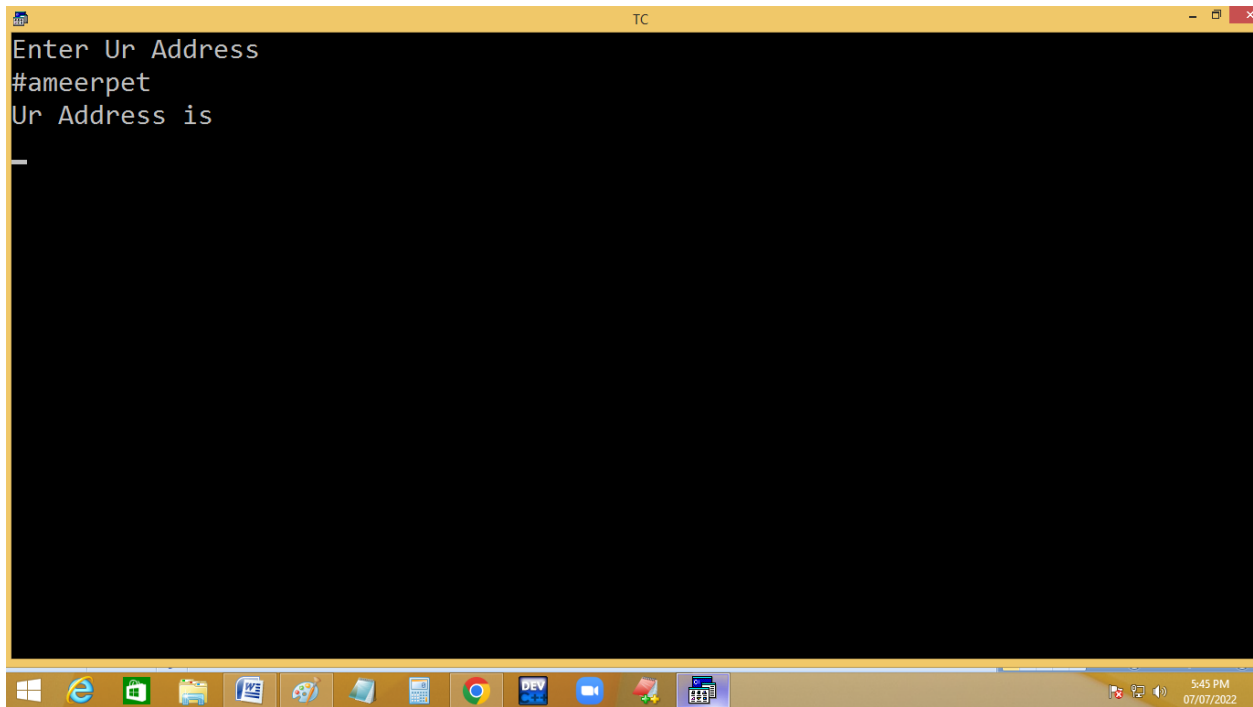
The Windows taskbar at the bottom shows various application icons and the system clock indicating 5:45 PM on 07/07/2022.



The screenshot shows the Turbo C++ (TC) IDE with the same menu bar and toolbar. The main window now displays the output of the program's execution:

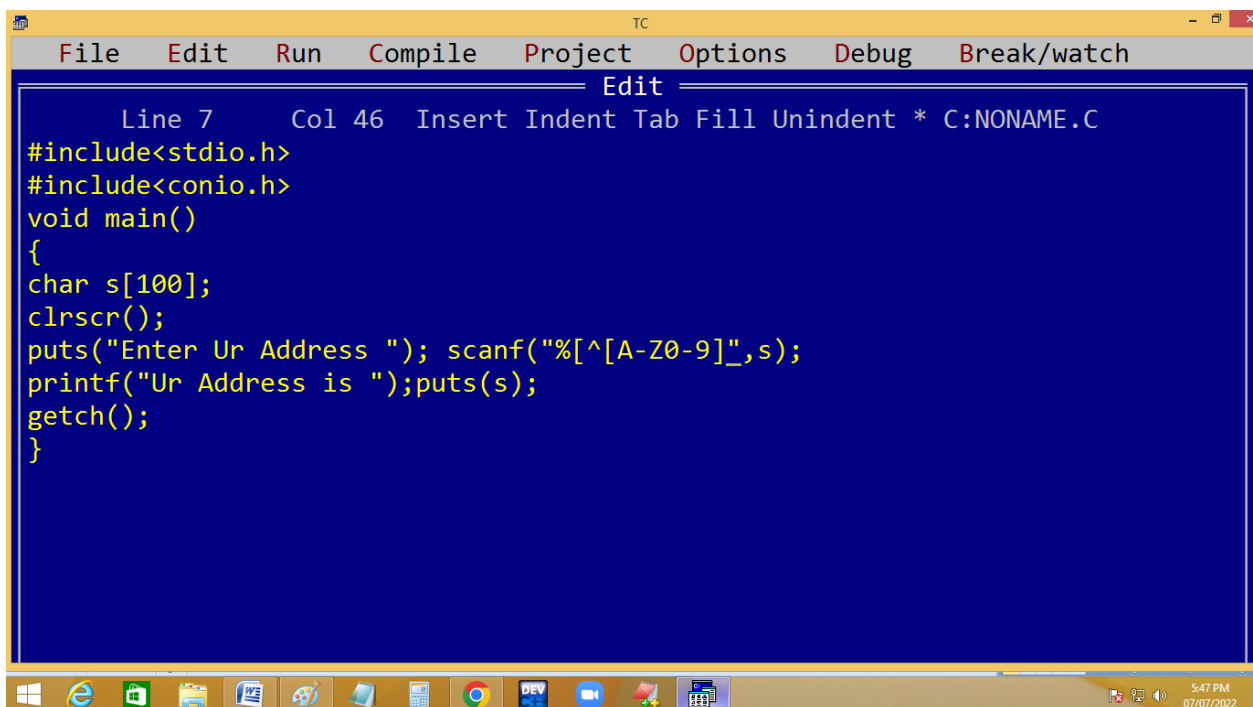
```
Enter Ur Address
kishore@nareshit.com
Ur Address is kishore
```

The Windows taskbar at the bottom remains the same, showing the system clock at 5:45 PM on 07/07/2022.



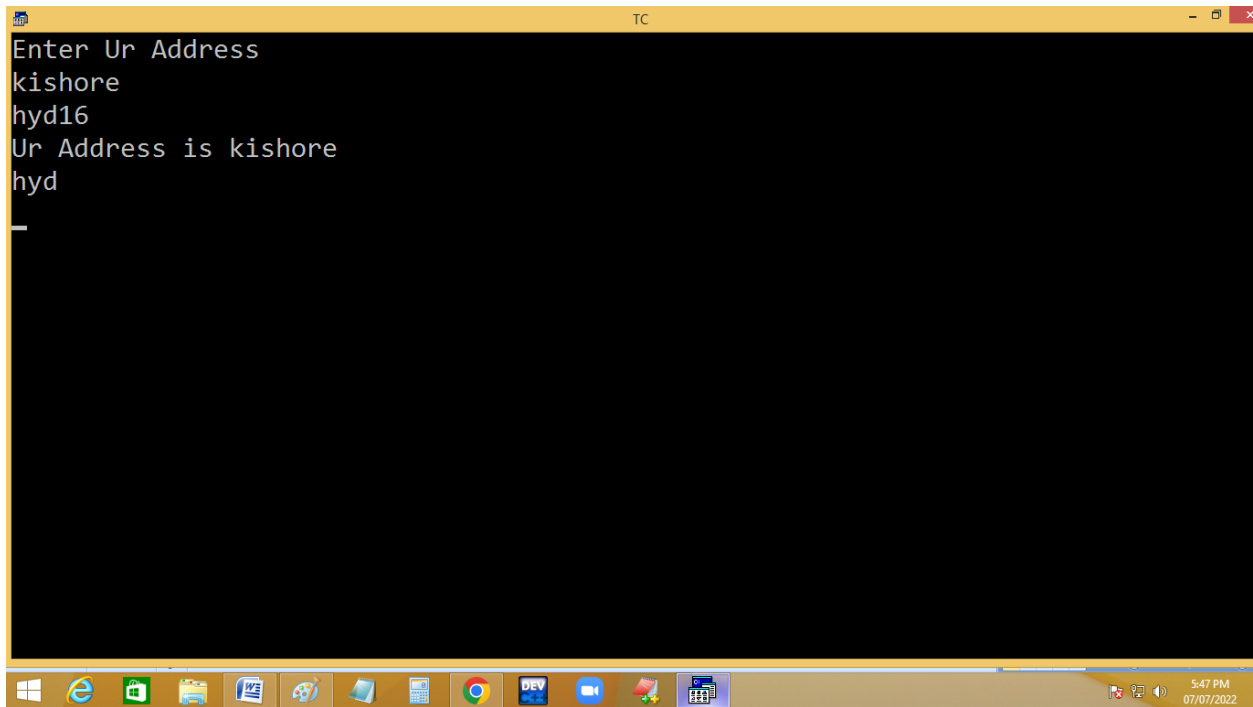
A screenshot of a Turbo C++ (TC) console window. The window has a yellow title bar with the text "TC" and standard window controls. The black console area displays the following text: "Enter Ur Address", "#ameerpet", and "Ur Address is". A white cursor is positioned on the line following "Ur Address is". The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 5:45 PM on 07/07/2022.

```
TC
Enter Ur Address
#ameerpet
Ur Address is
_
```



A screenshot of the Turbo C++ (TC) source code editor. The window has a yellow title bar with "TC" and standard window controls. Below the title bar is a menu bar with options: File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The editor area has a blue background and displays the following C code: "#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();", and "}". The status bar at the bottom shows "Line 7 Col 46 Insert Indent Tab Fill Unindent * C:NONAME.C". The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 5:47 PM on 07/07/2022.

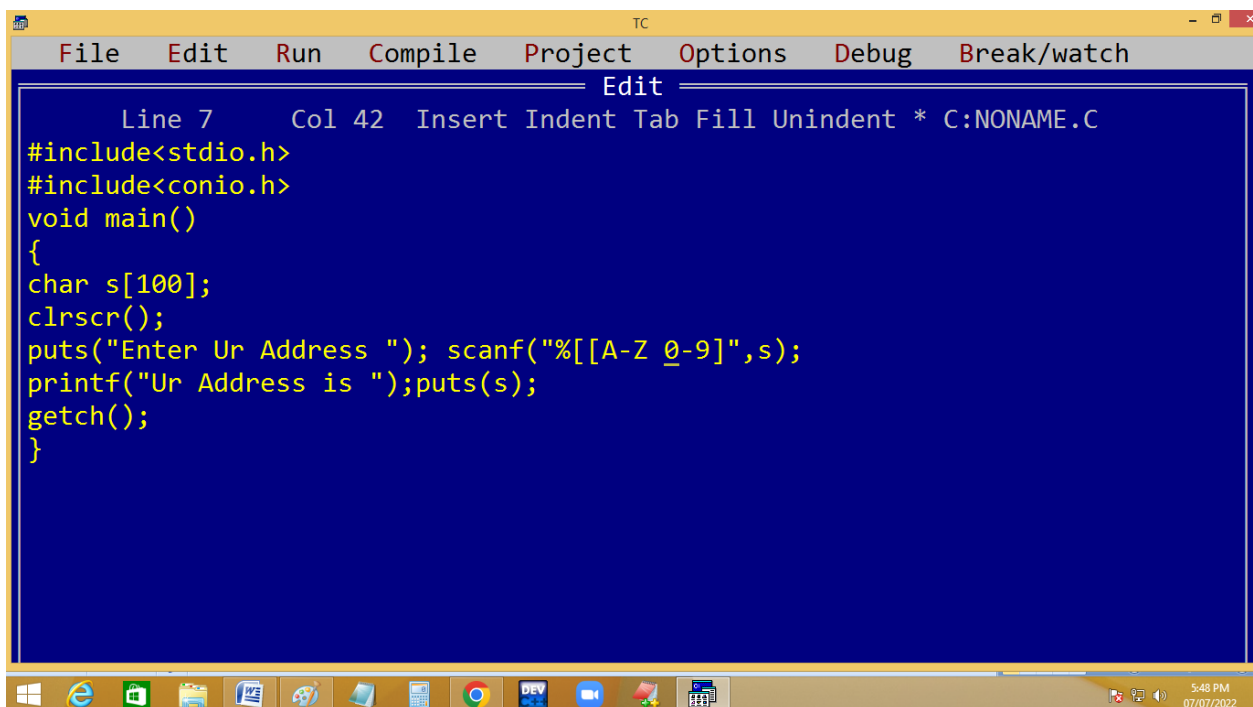
```
TC
File Edit Run Compile Project Options Debug Break/watch
Edit
Line 7 Col 46 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
puts("Enter Ur Address "); scanf("%[^A-Z0-9]",s);
printf("Ur Address is ");puts(s);
getch();
}
```

TC

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

Windows taskbar at the bottom shows icons for various applications and the system clock indicating 5:47 PM on 07/07/2022.



TC

File Edit Run Compile Project Options Debug Break/watch

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();
}
```

Windows taskbar at the bottom shows icons for various applications and the system clock indicating 5:48 PM on 07/07/2022.

