

Direct initialization of strings:

The screenshot shows the Turbo C++ IDE interface. The top window is the editor, displaying the following C code:

```
Line 11 Col 10 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
char s1[2]={"N"},s2[ ]="N",s3[2]={ 'N'},s4[ ]={'N','\0'},s5[ ]={'N'};
clrscr();
puts(s1);
puts(s2);
puts(s3);
puts(s4);
puts(s5);
getch();
}
```

The bottom window is the terminal, showing the execution results:

```
N
N
N
N
Nc∞ ↔@@
```

The desktop taskbar at the bottom shows various application icons, and the system tray indicates the date and time as 03-Oct-23 at 2:31 PM.

Storing multiple strings:

TC

File Edit Run Compile Project Options Debug Break/watch

Line 10 Col 26 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[5][20]={"Virat Kohli","Rohith Sharma","Surya Kumar Yadav","Ms Dhoni",
"Shubman Gill"; int i;
clrscr();
puts("NAMES");
puts("*****");
for(i=0;i<5;i++)puts(s[i]);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

2:36 PM
03-Oct-23

TC

NAMES

```
*****
Virat Kohli
Rohith Sharma
Surya Kumar Yadav
Ms Dhoni
Shubman Gill
```

Activate Windows
Go to PC settings to activate Windows.

2:36 PM
03-Oct-23

The image shows a Windows desktop environment with two windows open. The top window is a code editor titled 'TC' with a yellow header bar containing menu items: File, Edit, Run, Compile, Project, Options, Debug, Break/watch, and Edit. The main area displays C code for printing five names. The bottom window is a terminal window titled 'TC' with a yellow header bar showing system icons and the date/time (2:37 PM, 03-Oct-23). The terminal displays the output of the program, which prints 'NAMES' followed by five names separated by asterisks (*). Both windows have a watermark in the bottom right corner: 'Activate Windows' and 'Go to PC settings to activate Windows.'

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[5][20]={"Virat Kohli","Rohith Sharma","Surya Kumar Yadav","Ms Dhoni",
"Shubman Gill"; int i;
clrscr();
puts("NAMES");
puts("*****");
for(i=0;i<5;i++)putchar(s[i][i]);
getch();
}
```

NAMES

VorDm_

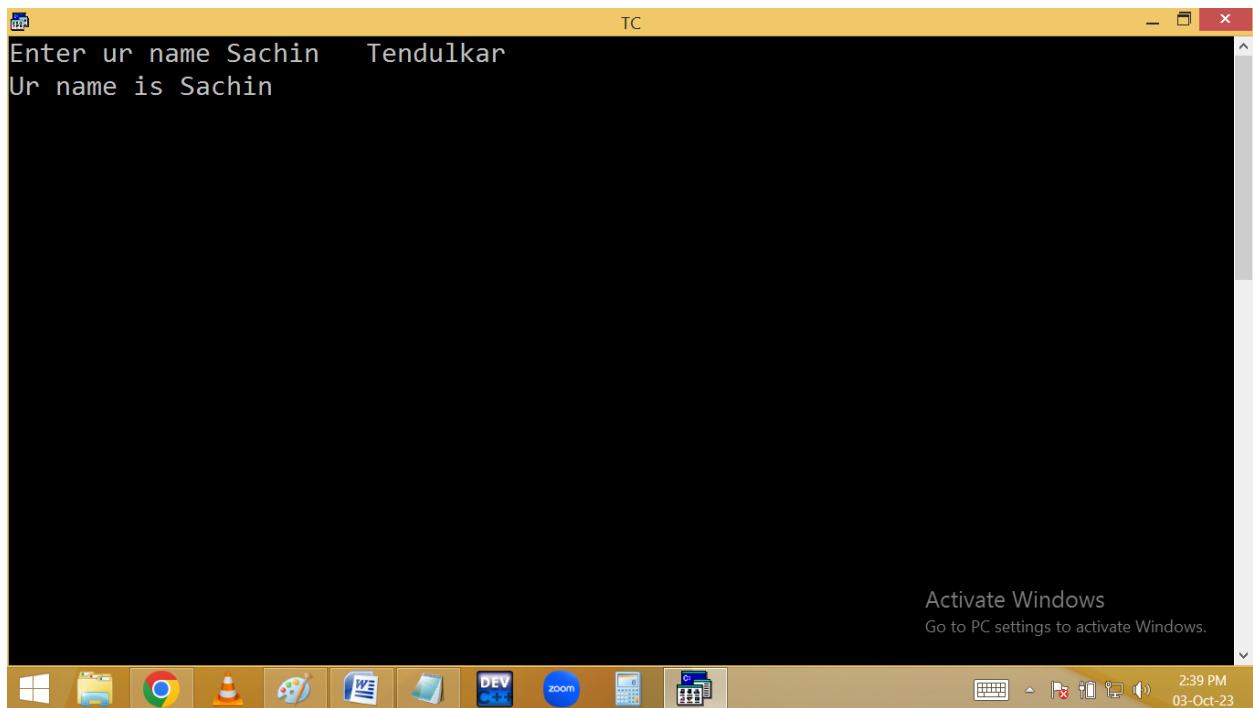
Reading and printing a string:

The screenshot shows the Turbo C++ IDE interface. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The title bar displays "TC". The status bar at the bottom shows "Line 8 Col 28 Insert Indent Tab Fill Unindent * E:2PM.C". The code editor contains the following C program:

```
#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();
}
```

In the bottom right corner, there is a watermark that reads "Activate Windows Go to PC settings to activate Windows."

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



gets(): It reads the string with spaces until pressing of enter key.

TC

File Edit Run Compile Project Options Debug Break/watch

Line 7 Col 32 Insert Indent Tab Fill Unindent * E:2PM.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();
}
```

Activate Windows
Go to PC settings to activate Windows.

TC

Enter ur name Sachin Tendulkar

Ur name is Sachin Tendulkar

Activate Windows
Go to PC settings to activate Windows.

TC

File Edit Run Compile Project Options Debug Break/watch

Line 8 Col 28 Insert Indent Tab Fill Unindent * E:2PM.C

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

Activate Windows
Go to PC settings to activate Windows.

Windows Taskbar icons: File Explorer, File Manager, Google Chrome, VLC, Paint, Notepad, DEV, Zoom, Calculator, Task View

TC

Enter ur name Ravindra Jadeja
Ur name is Ravindra Jadeja

Activate Windows
Go to PC settings to activate Windows.

Windows Taskbar icons: File Explorer, File Manager, Google Chrome, VLC, Paint, Notepad, DEV, Zoom, Calculator, Task View

Scan set / magic characters:

TC

File Edit Run Compile Project Options Debug Break/watch

Line 7 Col 37 Insert Indent Tab Fill Unindent * E:2PM.C

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

Activate Windows
Go to PC settings to activate Windows.

TC

```
Enter ur name kishore naidu
Ur name is kishore naidu
```

Activate Windows
Go to PC settings to activate Windows.

TC

```
Enter ur name sachin      ramesh      tendulkar
Ur name is sachin      ramesh      tendulkar
```

Activate Windows
Go to PC settings to activate Windows.

File Edit Run Compile Project Options Debug Break/watch

Line 8 Col 21 Insert Indent Tab Fill Unindent * E:2PM.C

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

Activate Windows
Go to PC settings to activate Windows.

TC

```
Enter ur address kishore
c/o naresh it
ameerpet
hyd
telangana
.
Ur addr is
kishore
c/o naresh it
ameerpet
hyd
telangana
```

Activate Windows
Go to PC settings to activate Windows.

File Edit Run Compile Project Options Debug Break/watch

Line 8 Col 18 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
printf("Enter a string "); scanf("%[^@#$*]",s);
printf("U entered\n");puts(s);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

2:48 PM 03-Oct-23

```
TC
Enter a string kishore#1
U entered
kishore

Activate Windows
Go to PC settings to activate Windows.

TC
Enter a string kishroe@gmail.com
U entered
kishroe

Activate Windows
Go to PC settings to activate Windows.

TC
```

TC

File Edit Run Compile Project Options Debug Break/watch

Line 7 Col 41 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
printf("Enter a string "); scanf("%[^0-9]",s);
printf("U entered\n");puts(s);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

TC

```
Enter a string James Bond 007
U entered
James Bond
```

Activate Windows
Go to PC settings to activate Windows.

TC

File Edit Run Compile Project Options Debug Break/watch

Line 9 Col 42 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
printf("Enter a string "); scanf("%[^A-Z 0-9]",s);
printf("U entered\n");puts(s);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

Windows Taskbar icons: File Explorer, File, Google Chrome, VLC, Paint, Notepad, DEV, Zoom, Calculator, Control Panel

TC

Enter a string james BOND 007

U entered

james

Activate Windows
Go to PC settings to activate Windows.

Windows Taskbar icons: File Explorer, File, Google Chrome, VLC, Paint, Notepad, DEV, Zoom, Calculator, Control Panel

```
TC
Enter a string bahu bali 2
U entered
bahu

Activate Windows
Go to PC settings to activate Windows.

Windows Start Chrome VLC Paint Word OneNote DEV ZOOM Task View 2:51 PM
03-Oct-23
```

TC

File Edit Run Compile Project Options Debug Break/watch

Line 7 Col 37 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100];
clrscr();
printf("Enter a string "); scanf("%[A-Z 0-9]",s);
printf("U entered\n");puts(s);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

TC

Enter a string namo@1
U entered

Activate Windows
Go to PC settings to activate Windows.

2:52 PM
03-Oct-23

TC

```
Enter a string HYD16-telangana
U entered
HYD16
```

Activate Windows
Go to PC settings to activate Windows.

File Edit Run Compile Project Options Debug Break/watch

Line 7 Col 44 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
    char s[100];
    clrscr();
    printf("Enter a string "); scanf("%[a-zA-Z]",s);
    printf("U entered\n");puts(s);
    getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

```
Enter a string Hyd-1
U entered
Hyd
```

Activate Windows
Go to PC settings to activate Windows.

Reading and printing multiple strings:

The screenshot shows a Windows desktop environment with two windows open. The top window is a code editor titled 'TC' with a menu bar including File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The main area displays the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    char s[5][100]; int i;
    clrscr();
    puts("Enter 5 names ");
    for(i=0;i<5;i++)gets(s[i]);
    puts("NAMES");
    puts("-----");
    for(i=0;i<5;i++)puts(s[i]);
    getch();
}
```

The bottom window is a terminal window titled 'TC' showing the execution of the program. It prompts the user to enter 5 names, which are then stored in an array. The program then prints the string 'NAMES' followed by a dashed line separator and the names again. The terminal window also displays a watermark for activating Windows.

Finding string length and reverse string using user defined programs:

TC

File Edit Run Compile Project Options Debug Break/watch

Line 1 Col 23 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100]; int i;
clrscr();
puts("Enter a string ");gets(s);
for(i=0;s[i]!='\0';i++) { } /* strlen */
printf("Length = %d\n",i);
printf("Reverse ");
while(i>0) printf("%c",s[--i]);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

TC

Enter a string
UmaR
Length = 4
Reverse RamU

Activate Windows
Go to PC settings to activate Windows.

```
TC
Enter a string
Devi Mahesh
Length = 11
Reverse hsehaM iveD

Activate Windows
Go to PC settings to activate Windows.

TC
Enter a string
madam
Length = 5
Reverse madam

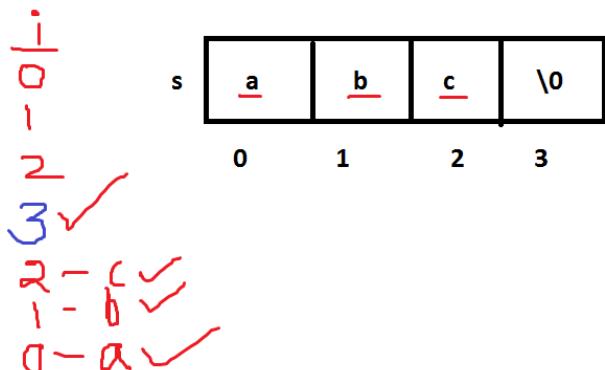
Activate Windows
Go to PC settings to activate Windows.

TC
Enter a string
madam
Length = 5
Reverse madam
```

```
for( i=0; s[i]!='\0'; i++ ) /* strlen */  
{ }  
}
```

```
p("Length=%d\n",i);
```

```
for( ; i>0 ; printf("%c", s[-i] ) ); strrev
```



The screenshot shows a Windows desktop environment with two windows open. The top window is a Text Editor titled 'TC' with the file name 'E:2PM.C'. The code in the editor is:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    char s[100]; int i;
    clrscr();
    puts("Enter a string ");gets(s);
    for(i=0;s[i];i++) /* strlen */
    printf("Length = %d\n",i);
    printf("Reverse ");
    while(i>0) putchar(s[--i]);
    getch();
}
```

The bottom window is a Command Prompt window titled 'TC' showing the execution of the program:

```
Enter a string
samosa
Length = 6
Reverse asomas
```

Lower to upper / Upper to lower conversion using user defined programs:

```
Line 13    Col 36  Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100]; int i;
clrscr();
puts("Enter a string ");gets(s);
for(i=0;s[i];i++)
{
if(s[i]>='a' && s[i]<='z')s[i]-=32; /* strupr */
else if(s[i]>='A' && s[i]<='Z') s[i]+=32; /* strlwr */
}
printf("Converted string is %s",s);
getch();
}
```

Activate Windows

Go to PC settings to activate Windows.

```
Enter a string  
Bahu Bali - 2  
Converted string is bAHU bALI - 2
```

```

for( i=0; s[i]!='\0';i++)
{
    if(s[i]>='a'&&s[i]<='z')s[i]-=32;
    else if(s[i]>='A'&&s[i]<='Z')s[i]+=32;
}

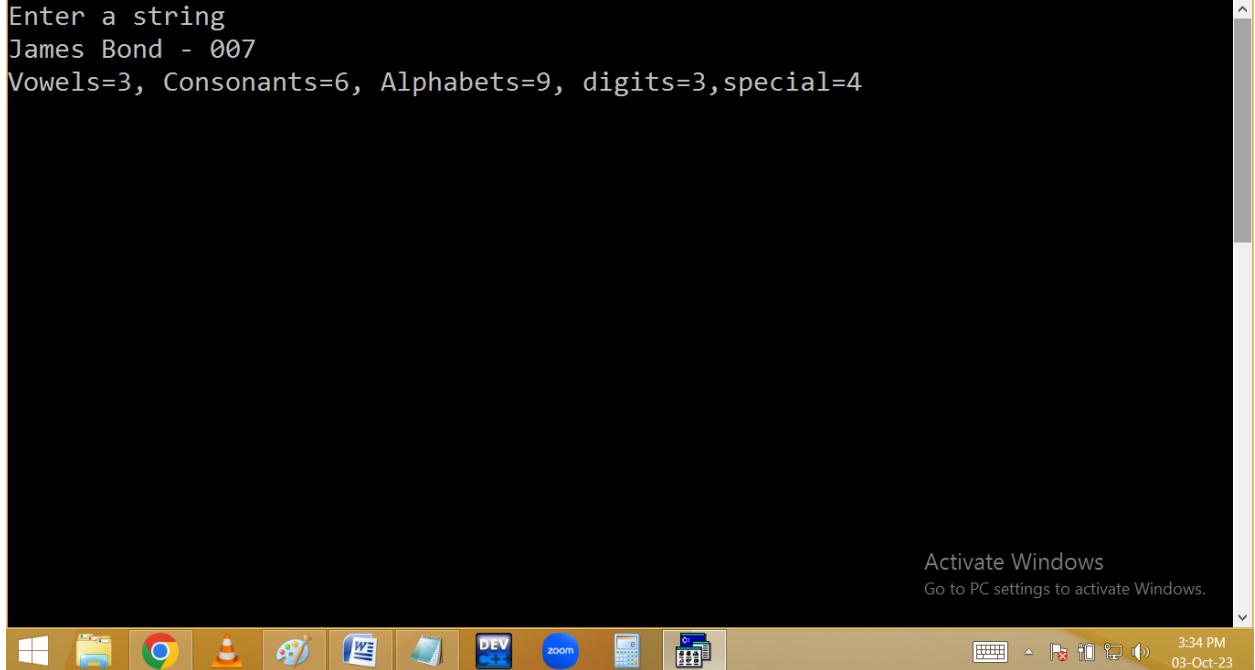
```

				99-32=67=C
s	A	b	c	\0
0				
1				
2				
3				

65	98-32=66=B
<u>32</u>	
97-a	

Read a string and find out the no of vowels / consonants / digits / special char and alphabets.

```
#include<stdio.h> #include<conio.h>
void main()
{
char s[100]; int i,v,c,sp,d;clrscr();
puts("Enter a string ");gets(s); v=c=sp=d=0;
for(i=0;s[i];i++)
{
if(s[i]>='A' && s[i]<='Z')s[i]+=32; /* strlwr */
if(s[i]>='a' && s[i]<='z')
{
if(s[i]=='a'||s[i]=='e'||s[i]=='i'||s[i]=='o'||s[i]=='u')v++; else c++;
}
else if(s[i]>='0'&&s[i]<='9')d++; else sp++;
}
printf("Vowels=%d, Consonants=%d, Alphabets=%d, digits=%d,special=%d",
v,c,v+c,d,sp);
getch(); }
```



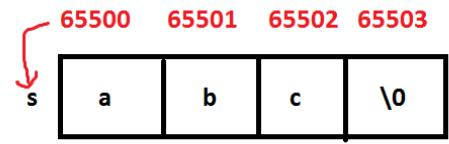
The screenshot shows a Windows desktop environment. At the top, there's a taskbar with various icons including File Explorer, Google Chrome, and Zoom. The main window is a terminal or command-line interface with a dark blue background. The title bar of the window says "TC". The menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", "Debug", and "Break/watch". Below the menu, status information shows "Line 2 Col 1 Insert Indent Tab Fill Unindent * E:2PM.C". The code area contains the following C program:

```
#include<stdio.h>
#include<conio.h>
void main()
{
char s[100]; int i;
clrscr();
puts("Enter a string ");gets(s);
for(i=0;s[i];i++)puts(s+i);
getch();
}
```

The output window below the code shows the execution of the program. It prompts the user to enter a string ("Enter a string ") and then prints each character of the string followed by a new line. The input "Bharathi" is shown, and the output displays each character from 'B' to 'i' on a new line.

Activate Windows
Go to PC settings to activate Windows.

3:39 PM
03-Oct-23



for(i=0; s[i]!='\0';i++) puts(s+i);

65500+0*1=65500 to \0 ==> abc
 65500+1*1=65501 to \0 ==> bc
 65500+2*1=65502 to \0 ==> c
 65500+3*1=65503=\0 != \0 ==>false

Home work:

Usha

Usha

Ush

Us

U

Jaanu I miss you → 4 words

