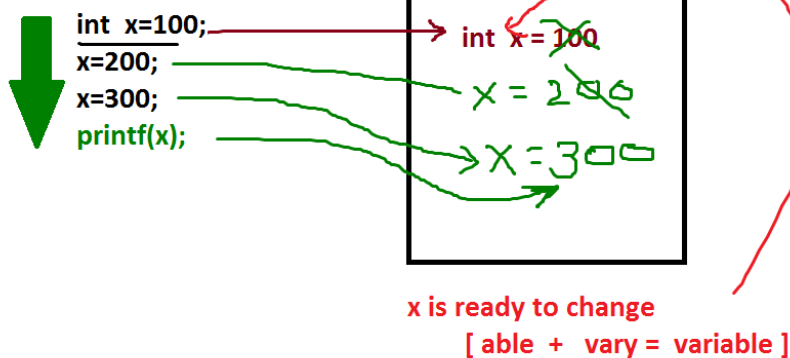


**Identifiers:** Identifiers are nothing but names of variables / functions / files / array / pointer etc.

Example for variables:

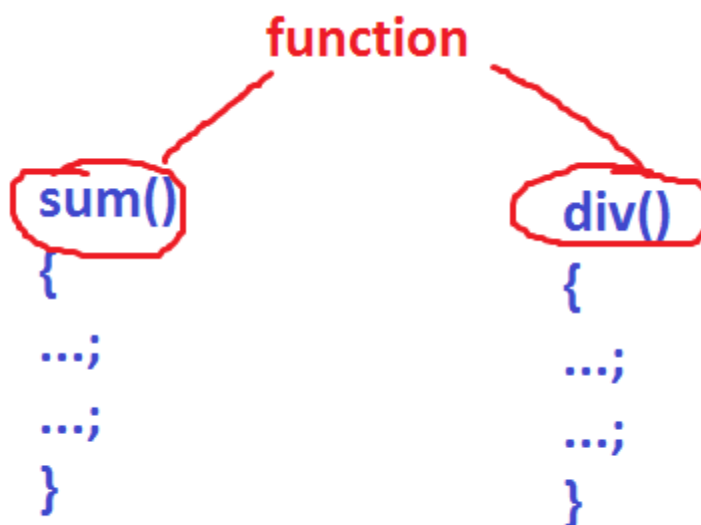
```
int a=10; Here a is used to identify 10. Hence a is an identifier
int b=20;
```

Top-down approach



x, a, b are container variable is a container is used to store the values in our programs.

Examples for functions:



Example for files:

a.c, b.cpp, c.java, d.py,...

**array example:** int a[10];

**pointer example:** int \* p ;

### **Naming rules:**

- 1.Name should have to start with alphabet or underscore only [ \_ ]
- 2.Numbers allowed but not at starting position.

TC

File Edit Run Compile Project Options Debug Break/watch

Line 4 Col 10 Insert Indent Tab Fill Unindent \* E:NONAME.C

```
#include<stdio.h>
void main()
{
int    v1;
}
```

Compiling

Main file: NONAME.C  
Compiling: EDITOR → NONAME.C

	Total	File
Lines compiled:	217	217
Warnings:	0	0
Errors:	0	0

Available memory: 251K

Activate Windows  
Go to PC settings to activate Windows.

Page: 2 of 2 Words: 64

You are screen sharing Stop Share

TC

File Edit Run Compile Project Options Debug Break/watch

Error: Declaration syntax error in function main

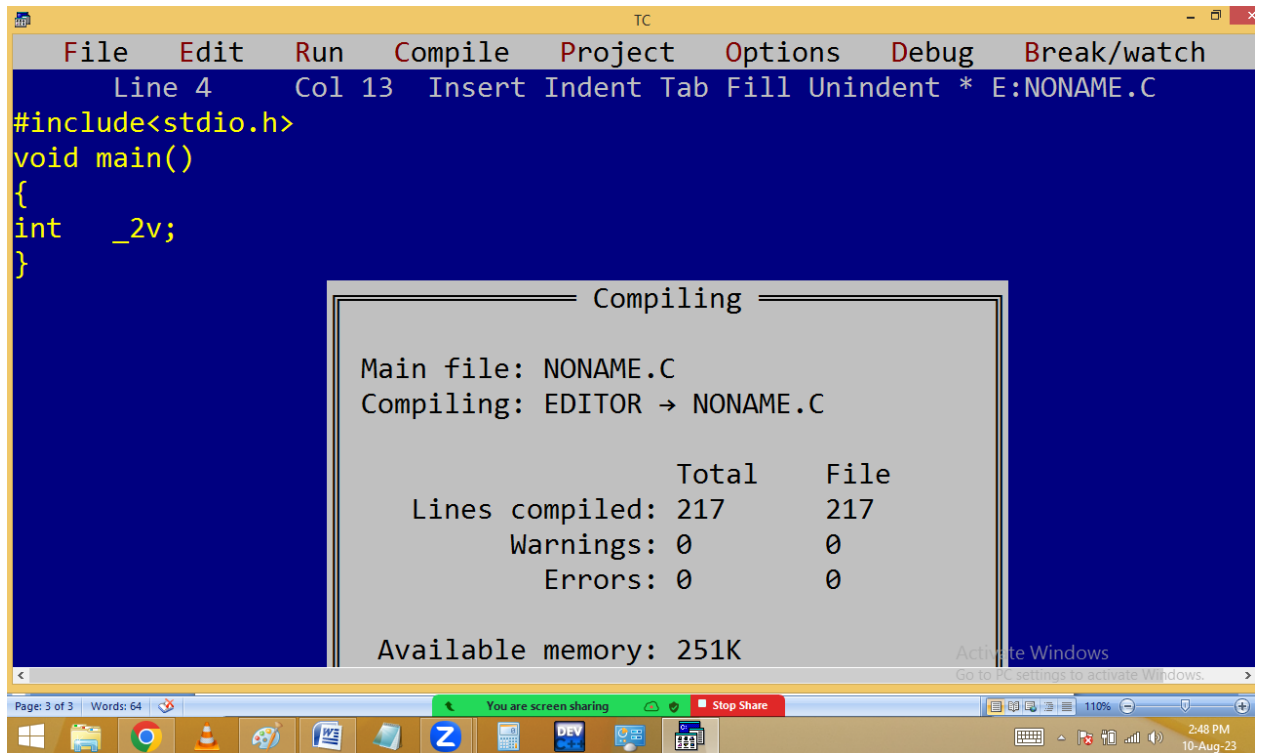
```
#include<stdio.h>
void main()
{
int    2v;
}
```

Activate Windows  
Go to PC settings to activate Windows.

Page: 2 of 3 Words: 64

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2:47 PM  
10-Aug-23



The screenshot shows the Turbo C++ (TC) IDE interface. The main window displays a C program with the following code:

```
Line 4 Col 13 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
void main()
{
int  _2v;
}
```

A "Compiling" dialog box is open in the foreground, showing the following information:

Main file: NONAME.C  
Compiling: EDITOR → NONAME.C

	Total	File
Lines compiled:	217	217
Warnings:	0	0
Errors:	0	0

Available memory: 251K

The Windows taskbar at the bottom shows the system clock as 2:48 PM on 10-Aug-23. A status bar at the bottom of the IDE indicates "Page: 3 of 3" and "Words: 64". A green banner across the taskbar reads "You are screen sharing" with a "Stop Share" button.

3. Spaces not allowed.

The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot shows the source code for a file named NONAME.C. The code is as follows:

```
#include<stdio.h>
void main()
{
int    ab;
}
```

A compilation window is open, displaying the following information:

```
Compiling

Main file: NONAME.C
Compiling: EDITOR -> NONAME.C

Total      File
Lines compiled: 217    217
Warnings: 0           0
Errors: 0             0
```

The bottom screenshot shows the same source code, but with a syntax error highlighted in red: "Error: Declaration syntax error in function main". The error is located on the line `int a b;`. The code in this window is:

```
#include<stdio.h>
void main()
{
int    a b;
}
```

4.Special characters not allowed except \_

The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays a compilation error: "Error: Illegal character '\$' (0x24) in function main". The code in the editor is as follows:

```
#include<stdio.h>
void main()
{
int  a$;
}
```

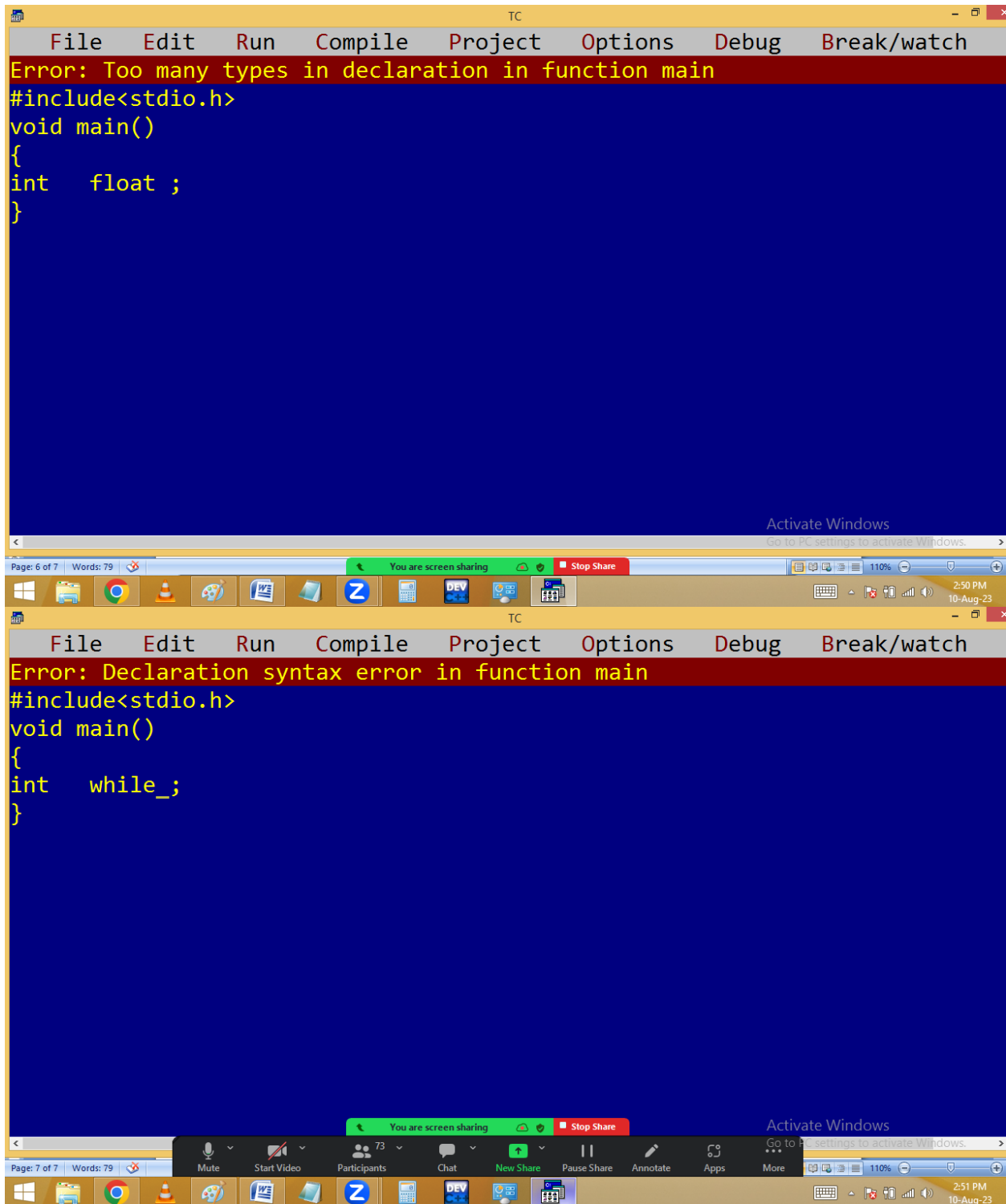
The bottom screenshot shows the same code after correction, with the variable name changed from `a$` to `_a_`. A "Compiling" dialog box is open, showing the following details:

Main file: NONAME.C  
Compiling: EDITOR → NONAME.C

	Total	File
Lines compiled:	217	217
Warnings:	0	0
Errors:	0	0

Available memory: 251K

5.Keywords not allowed.



6. Identifiers are case sensitive i.e. lower and upper are different.

TC

File Edit Run Compile Project Options Debug Break/watch

Line 5 Col 17 Insert Indent Tab Fill Unindent \* E:NONAME.C

```
#include<stdio.h>
void main()
{
int    Float ;
int    While ;
}
```

Compiling

Main file: NONAME.C  
Compiling: EDITOR → NONAME.C

	Total	File
Lines compiled:	218	218
Warnings:	0	0
Errors:	0	0

Available memory: 251K

Page: 7 of 7 Words: 79

You are screen sharing Stop Share

110%

2:51 PM  
10-Aug-23



The screenshot displays the Turbo C++ (TC) IDE interface. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates 'Line 6 Col 1 Insert Indent Tab Fill Unindent \* E:NONAME.C'. The editor window contains the following C code:

```
#include<stdio.h>
void main()
{
    int    a=10;
    int    A=25;
    printf("a=%d, A=%d",a,A);
}
```

The output window at the bottom shows the result of the program execution: 'a=10, A=25'. The Windows taskbar at the bottom shows the time as 2:52 PM on 10-Aug-23. A screen sharing overlay is visible across the bottom of the image.

7. Duplicate names not allowed in same function.

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Error: Redclaration of 'a' in function main

```
#include<stdio.h>
void main()
{
int    a=10;
int    a=25;
printf("a=%d",a);
}
```

Activate Windows  
Go to PC settings to activate Windows.

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TC

a=10\_

Activate Windows  
Go to PC settings to activate Windows.

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TC

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Line 7 Col 19 Insert Indent Tab Fill Unindent \* E:NONAME.C

```
#include<stdio.h>
void main()
{
    int x; /* var declaration */
    x=100; /* initialization */
    x=200; /* initi */
    x=300; /* init */
    printf("x=%d",x);
}
```

Activate Windows  
Go to PC settings to activate Windows.

You are screen sharing Stop Share

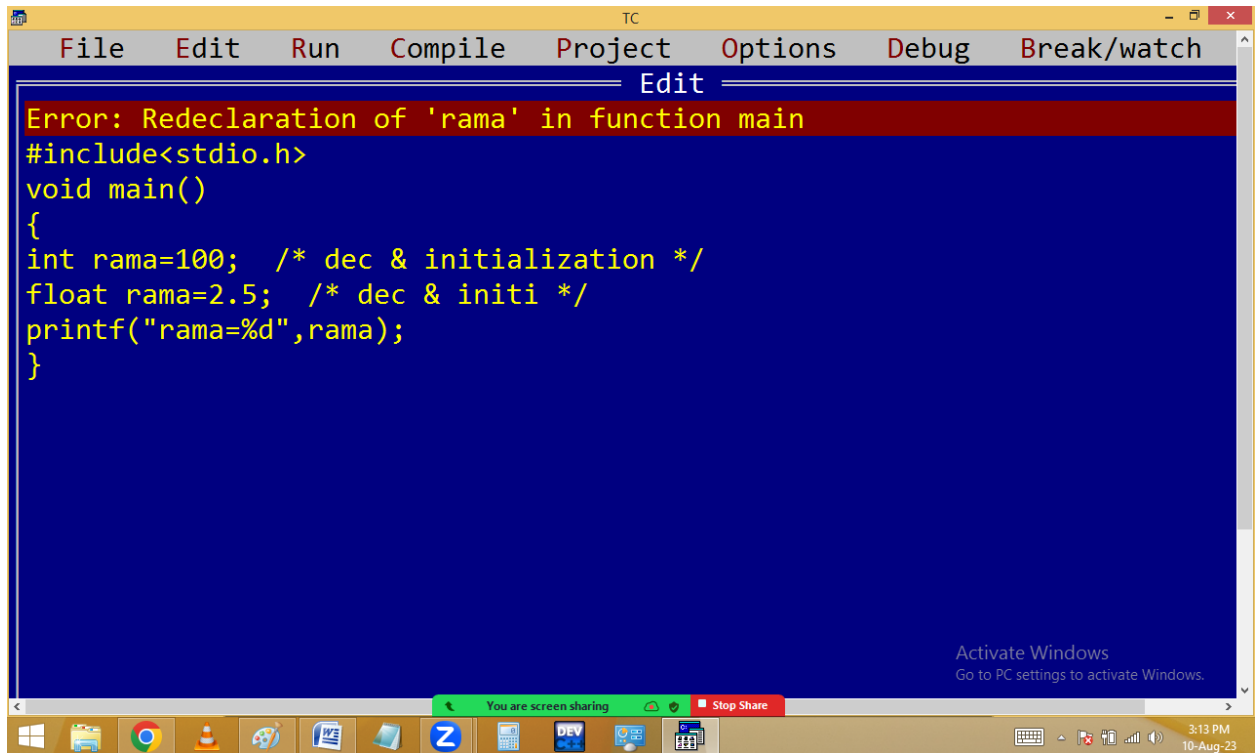
TC

x=300

Activate Windows  
Go to PC settings to activate Windows.

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TC



The screenshot shows the Turbo C++ (TC) IDE interface. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The 'Edit' menu is currently open. The main editing area has a dark blue background with yellow text. At the top of this area, a red error message reads: 'Error: Redeclaration of 'rama' in function main'. Below this, the code is as follows:

```
#include<stdio.h>
void main()
{
int rama=100; /* dec & initialization */
float rama=2.5; /* dec & initi */
printf("rama=%d",rama);
}
```

At the bottom of the IDE window, there is a status bar with the text 'You are screen sharing' and a 'Stop Share' button. The Windows taskbar is visible at the very bottom, showing various application icons and the system clock indicating 3:13 PM on 10-Aug-23.

8. Name may contain up to 32 characters and excess characters ignored by the compiler.

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Line 5 Col 1 Insert Indent Tab Fill Unindent \* E:NONAME.C

```
#include<stdio.h>
void main()
{
int abcdefghijklmnopqrstuvwxyz1234567890;
}
```

Linking

EXE file : NONAME.EXE  
Linking : LIB\CS.LIB

	Total	Link
Lines compiled:	217	PASS 2
Warnings:	0	0
Errors:	0	0

Available memory: 250K

Success : Press any key

Activate Windows  
Go to PC settings to activate Windows.

TC

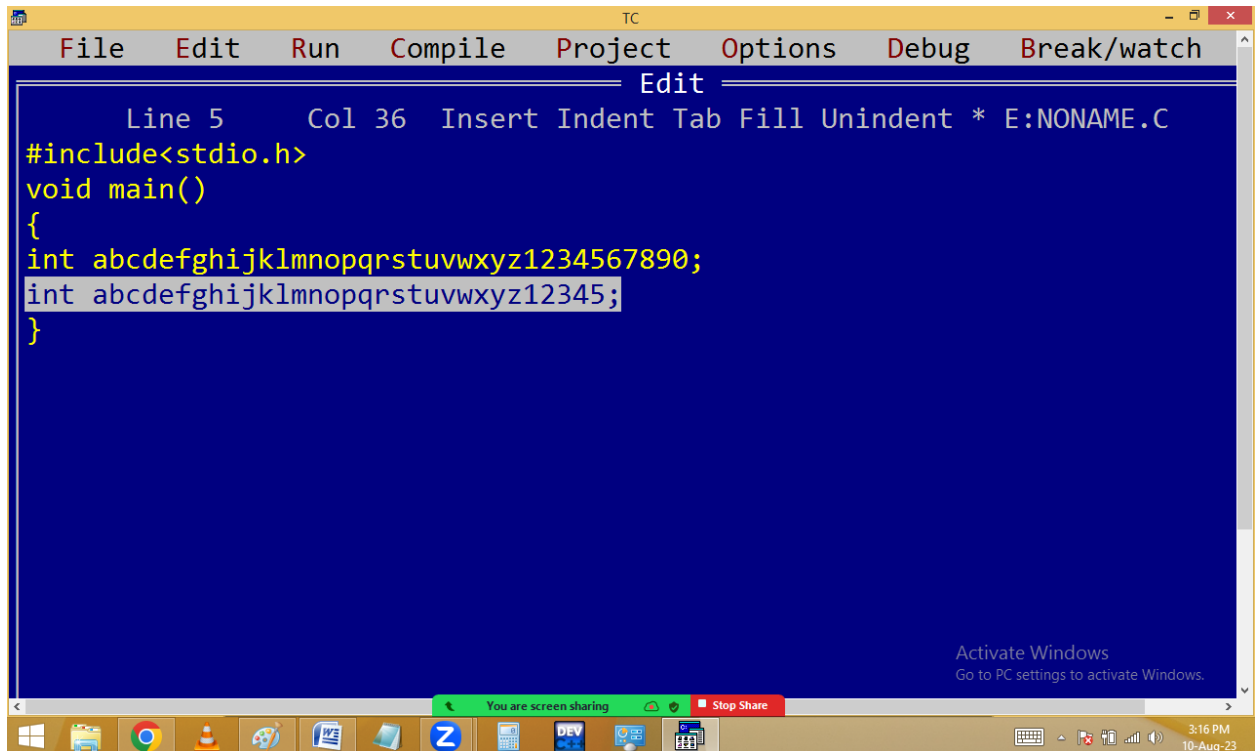
File Edit Run Compile Project Options Debug Break/watch

Edit

Error: Redeclaration of 'abcdefghijklmnopqrstuvwxyz123456' in function main

```
#include<stdio.h>
void main()
{
int abcdefghijklmnopqrstuvwxyz1234567890;
int abcdefghijklmnopqrstuvwxyz123456;
}
```

Activate Windows  
Go to PC settings to activate Windows.



The screenshot shows a Turbo C++ (TC) IDE window. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates 'Line 5 Col 36 Insert Indent Tab Fill Unindent \* E:NONAME.C'. The code in the editor is as follows:

```
#include<stdio.h>
void main()
{
int abcdefghijklmnopqrstuvwxyz1234567890;
int abcdefghijklmnopqrstuvwxyz12345;
}
```

The Windows taskbar at the bottom shows various icons including File Explorer, Chrome, VLC, Paint, Word, and several utility icons. A system tray notification on the right indicates '3:16 PM 10-Aug-23'. A green banner at the bottom of the IDE window states 'You are screen sharing' with a 'Stop Share' button.

**constants**: Fixed values are called constants. We can't change a constant value during program execution. Constant value should be provided at the time of declaration only. i.e. further initializations not allowed.

Eg:

**Numerical constants**:

```
const float pi = 3.14;
```

```
const int rollno=1234;
```

### **character constants:**

```
char name[ ]="Ravi"; ← string constant
```

```
char gender='M'; ← char constant
```

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Line 7 Col 20 Insert Indent Tab Fill Unindent \* E:NONAME.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
float pi = 3.14;
pi =20.5;
printf("pi=%f",pi);
}
```

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Go to PC settings to activate Windows.

File Explorer

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TC

pi=20.500000\_

You are screen sharing Stop Share

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Activate Windows  
Go to PC settings to activate Windows.

TC



TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Error: Cannot modify a const object in function main

```
#include<stdio.h>
#include<conio.h>
void main()
{
const float pi = 3.14;
pi =20.5;
printf("pi=%f",pi);
}
```

Activate Windows  
Go to PC settings to activate Windows.

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3:22 PM  
10-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Error: Cannot modify a const object in function main

```
#include<stdio.h>
#include<conio.h>
void main()
{
const float pi ; /* declaration */
pi =20.5; /* initialization */
printf("pi=%f",pi);
}
```

Activate Windows  
Go to PC settings to activate Windows.

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3:23 PM  
10-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Line 14 Col 1 Insert Indent Tab Fill Unindent \* E:NONAME.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
    const int id=1234;
    const char name[]="Ravi", gender='M';
    const float pi=3.14;
    clrscr();
    printf("id=%d\n",id);
    printf("name=%s\n",name);
    printf("gender=%c\n",gender);
    printf("pi=%f",pi);
    getch();
}
```

Activate Windows  
Go to PC settings to activate Windows.

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TC

```
id=1234
name=Ravi
gender=M
pi=3.140000
```

Activate Windows  
Go to PC settings to activate Windows.

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TC

# In dev C++:

