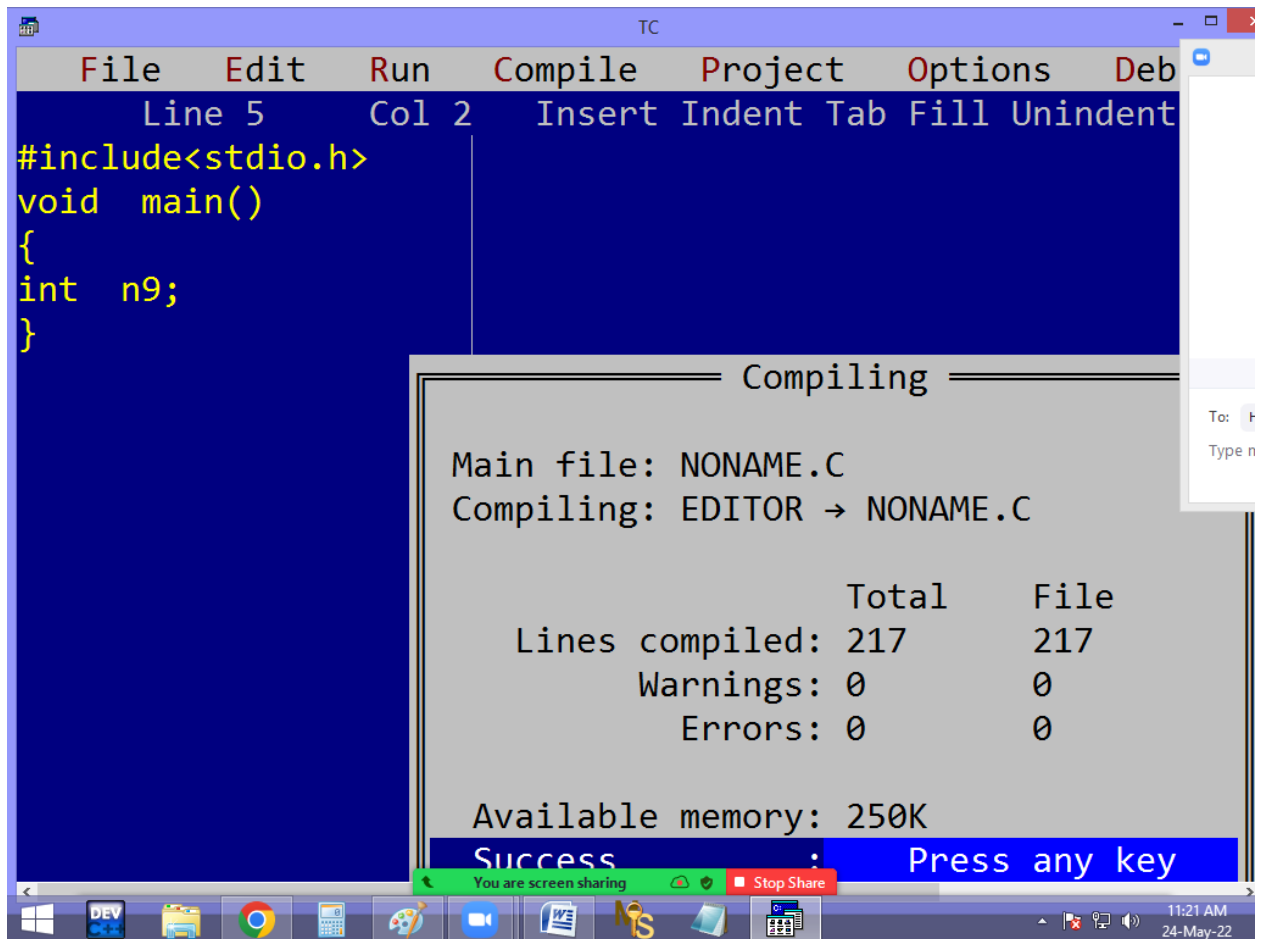


Identifier naming rules:

1. Name should have to start with alphabet or underscore [_]



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

```
Line 5 Col 2
#include<stdio.h>
void main()
{
int n9;
}
```

A "Compiling" dialog box is open in the foreground, showing the compilation process and results:

Compiling

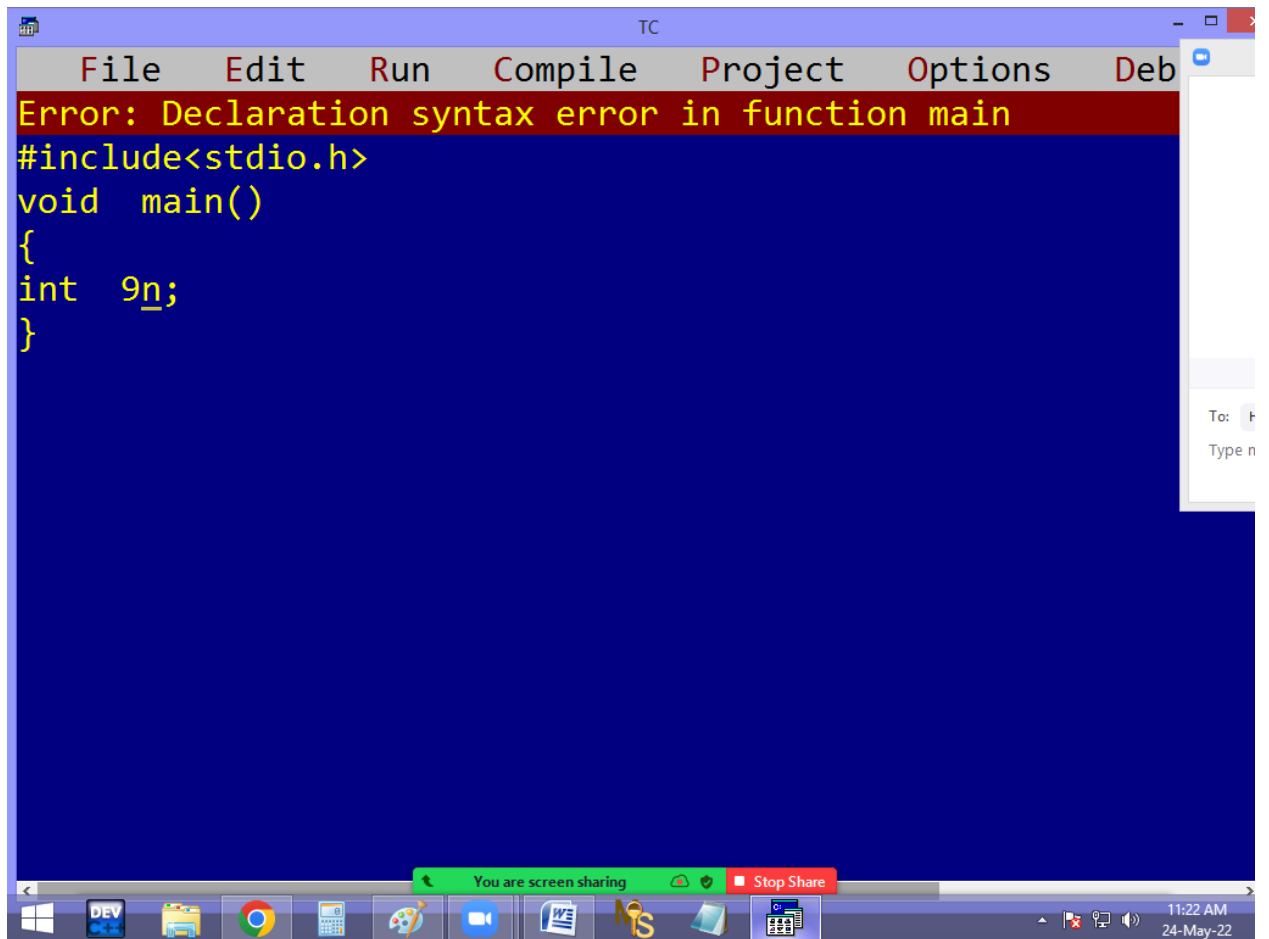
Main file: NONAME.C
Compiling: EDITOR → NONAME.C

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

Available memory: 250K

Success : Press any key

The Windows taskbar at the bottom shows the time as 11:21 AM on 24-May-22. A green status bar at the bottom of the IDE indicates "You are screen sharing" with a "Stop Share" button.



The image shows a screenshot of a Turbo C++ (TC) IDE window. The title bar at the top reads "TC". The menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", and "Deb". A red error message banner at the top of the editor area states: "Error: Declaration syntax error in function main". The code in the editor is as follows:

```
#include<stdio.h>
void main()
{
int 9n;
}
```

The code contains a syntax error: the variable name "9n" is invalid because it starts with a digit. The IDE background is dark blue. At the bottom of the window, there is a Windows taskbar with various icons (DEV, File Explorer, Chrome, Calculator, Paint, Video Chat, Word, NS, etc.) and a system tray showing the time "11:22 AM" and date "24-May-22". A green notification bar above the taskbar says "You are screen sharing" with a "Stop Share" button.

```
File Edit Run Compile Project Options Deb
Line 4 Col 14 Insert Indent Tab Fill Unindent
#include<stdio.h>
void main()
{
int _9n;
}
```

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

You are screen sharing Stop Share

11:22 AM
24-May-22

2. Numbers allowed but not at starting position.
3. Spaces not allowed.

```
File Edit Run Compile Project Options Deb
Line 4 Col 9 Insert Indent Tab Fill Unindent
#include<stdio.h>
void main()
{
int a b;
}
```

Compiling

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

	Total	File
Lines compiled:	216	216
Warnings:	0	0
Errors:	1	1

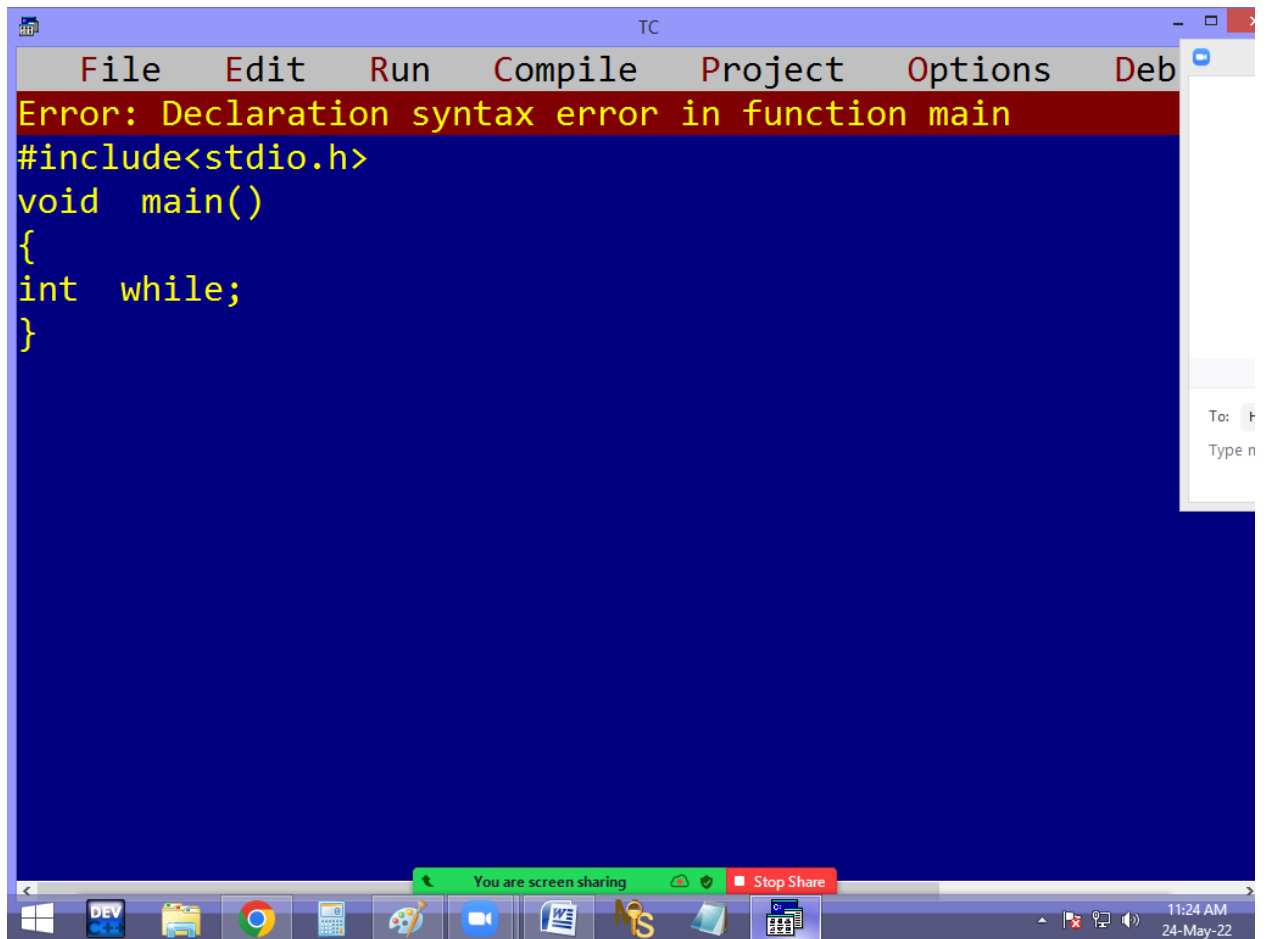
Available memory: 249K

Errors: Press any key

You are screen sharing Stop Share

11:23 AM
24-May-22

4. Keywords not allowed.

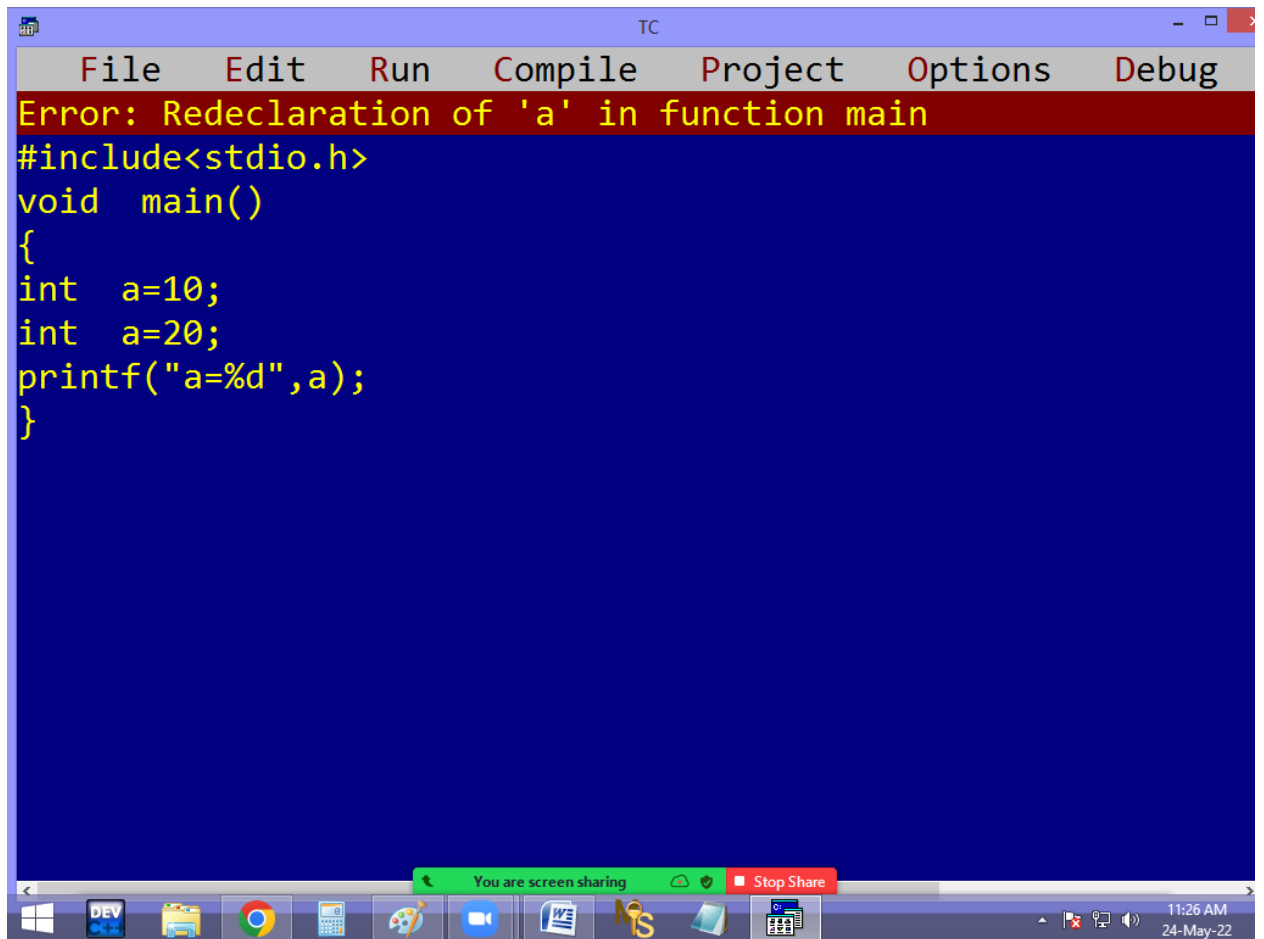


The screenshot shows a Turbo C++ (TC) IDE window. The menu bar includes File, Edit, Run, Compile, Project, Options, and Debug. A red error message banner at the top reads "Error: Declaration syntax error in function main". The code editor contains the following C code:

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

The Windows taskbar at the bottom shows various application icons, including DEV, File Explorer, Chrome, Calculator, Paint, Zoom, Word, and Notepad. A green notification bar above the taskbar says "You are screen sharing" with a "Stop Share" button. The system clock in the bottom right corner displays "11:24 AM" and "24-May-22".

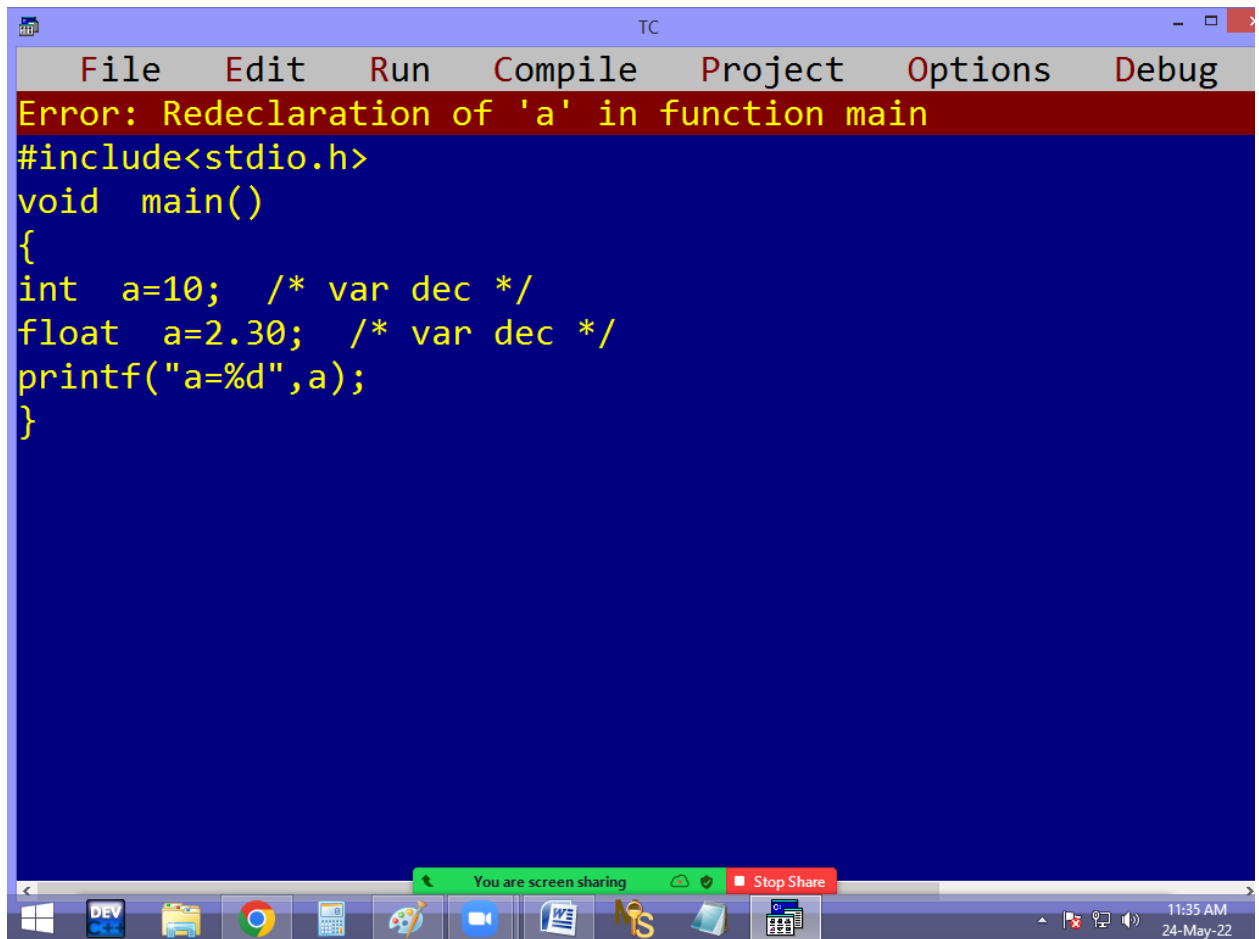
5. Duplicates names not allowed within same function.



The image shows a screenshot of a Turbo C++ (TC) IDE window. The title bar at the top reads "TC". Below the title bar is a menu bar with the following options: File, Edit, Run, Compile, Project, Options, and Debug. A red error message banner is displayed across the top of the code editor, stating "Error: Redclaration of 'a' in function main". The code editor has a dark blue background and contains the following C code:

```
#include<stdio.h>
void main()
{
int a=10;
int a=20;
printf("a=%d",a);
}
```

At the bottom of the screen, there is a Windows taskbar. A green notification bar above the taskbar says "You are screen sharing" with a "Stop Share" button. The taskbar includes icons for Windows, DEV, File Explorer, Google Chrome, Calculator, Paint, Video Conferencing, Word, Notepad, and a calendar. The system clock in the bottom right corner shows "11:26 AM" and "24-May-22".



The screenshot shows a Turbo C++ (TC) IDE window. The title bar reads 'TC'. The menu bar includes 'File', 'Edit', 'Run', 'Compile', 'Project', 'Options', and 'Debug'. A red error message banner at the top states: 'Error: Redclaration of 'a' in function main'. The code editor contains the following C code:

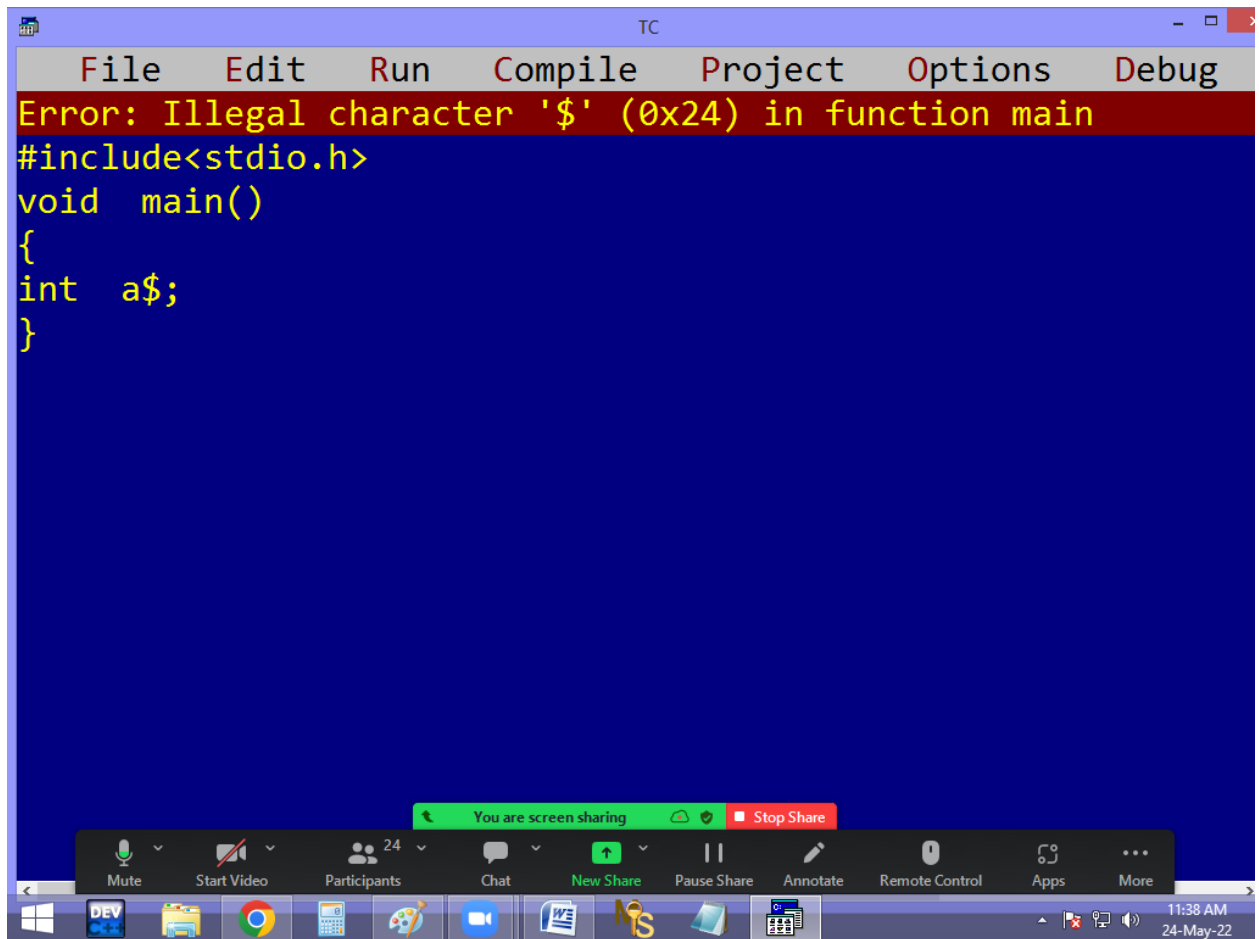
```
#include<stdio.h>
void main()
{
int a=10; /* var dec */
float a=2.30; /* var dec */
printf("a=%d",a);
}
```

At the bottom of the window, there is a taskbar with various application icons (Windows, DEV, File Explorer, Chrome, Calculator, Paint, Video Chat, Word, Notepad, etc.). A green status bar above the taskbar says 'You are screen sharing' with a 'Stop Share' button. The system clock in the bottom right corner shows '11:35 AM' and '24-May-22'.

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

```
TC
File Edit Run Compile Project Options Debug
Line 6 Col 24 Insert Indent Tab Fill Unindent * E
#include<stdio.h>
void main()
{
int a=10; /* var dec */
int A=20; /* var dec */
printf("a=%d, A=%d",a,A);
}
```

7. No special char except underscore [_].

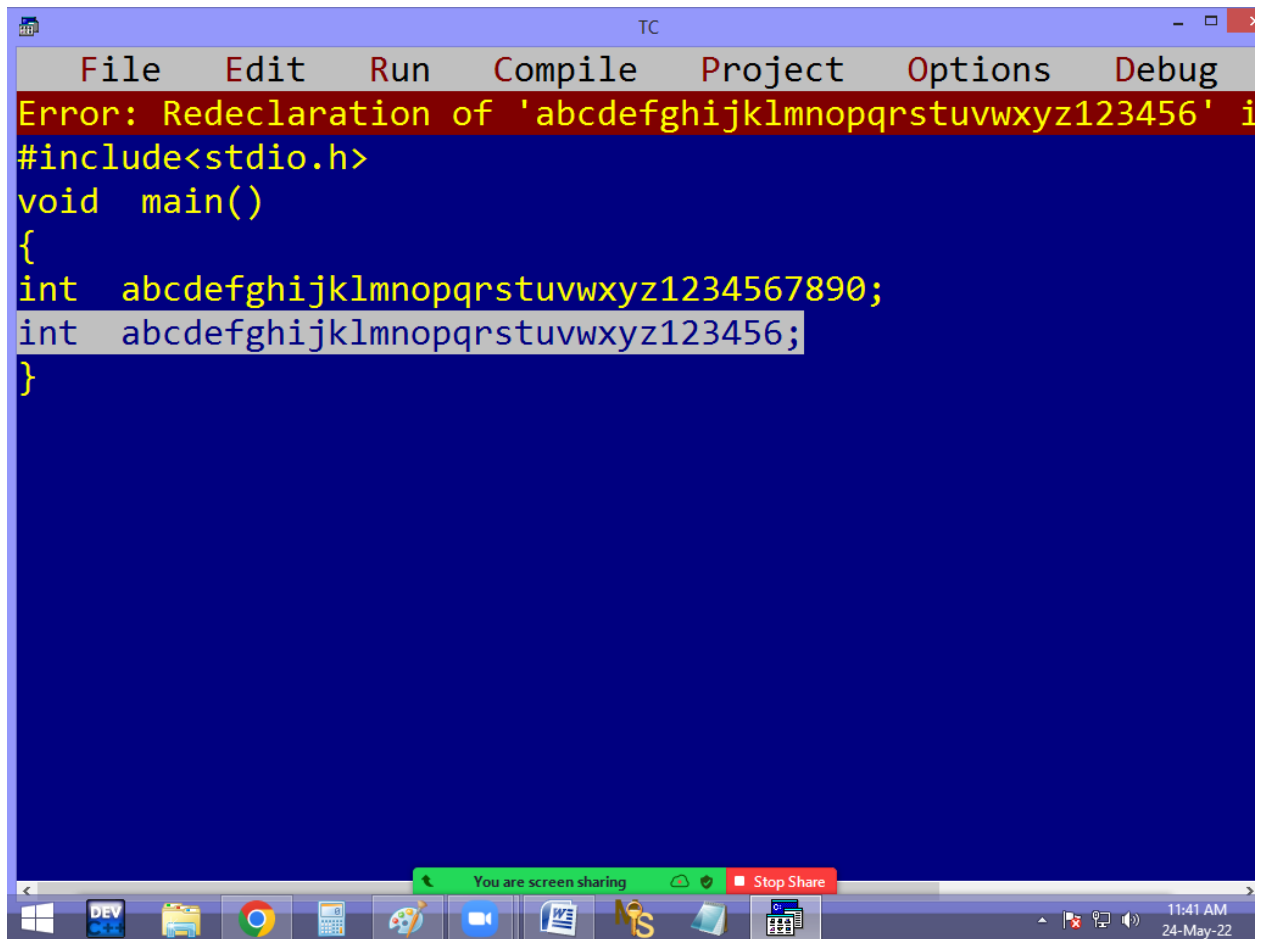


The screenshot shows a Turbo C++ (TC) IDE window. The menu bar includes File, Edit, Run, Compile, Project, Options, and Debug. A red error message banner at the top reads: "Error: Illegal character '\$' (0x24) in function main". The code in the editor is as follows:

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

At the bottom of the screen, there is a Windows taskbar with various application icons. A green notification bar above the taskbar states "You are screen sharing" with a "Stop Share" button.

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



The image shows a screenshot of a Turbo C++ (TC) IDE window. The title bar reads "TC". The menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", and "Debug". The main text area has a dark blue background and contains the following C code:

```
Error: Redclaration of 'abcdefghijklmnopqrstuvwxyz123456' i
#include<stdio.h>
void main()
{
int  abcdefghijklmnopqrstuvwxyz1234567890;
int  abcdefghijklmnopqrstuvwxyz123456;
}
```

The error message "Error: Redclaration of 'abcdefghijklmnopqrstuvwxyz123456' i" is displayed in red text at the top of the code area. The code defines a variable with a long name in the first line of the function and redeclares it in the second line. A green status bar at the bottom of the window reads "You are screen sharing" and "Stop Share". The Windows taskbar at the very bottom shows various application icons and the system clock indicating 11:41 AM on 24-May-22.

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

```
Line 5 Col 37 Insert Indent Tab Fill Unindent * E
#include<stdio.h>
void main()
{
int abcdefghijklmnopqrstuvwxyz1234567890;
int abcdefghijklmnopqrstuvwxyz12345;
}
```

A 'Linking' window is open in the foreground, displaying the following information:

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

	Total	Link
Lines compiled:	221	PASS 2
Warnings:	0	0
Errors:	0	0

Additional information in the linking window:

```
Available memory: 249K
Success
Press any key
```

The Windows taskbar at the bottom shows the time as 11:42 AM on 24-May-22.

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

Eg:

Numerical constants:

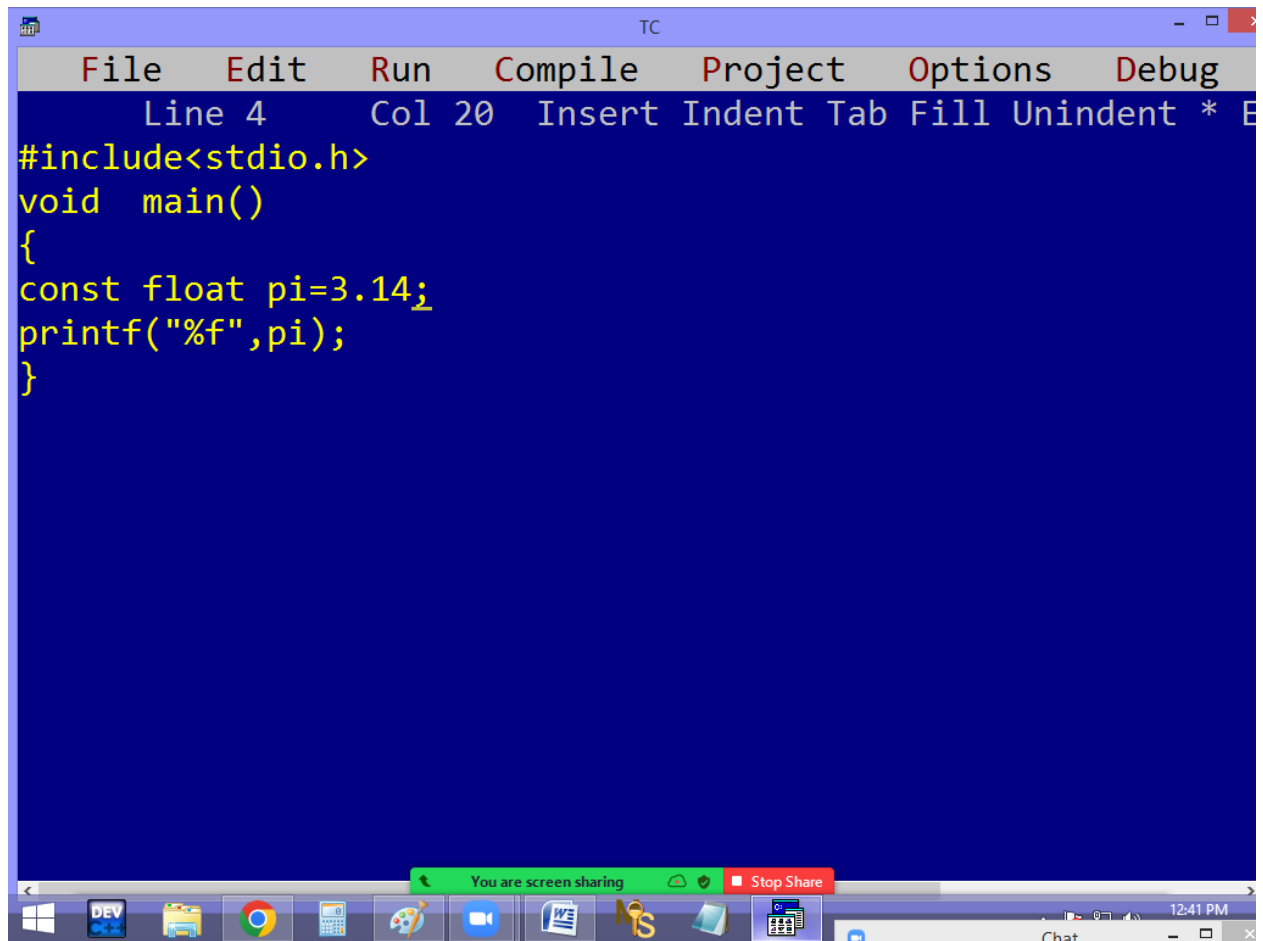
```
const float pi = 3.14;
```

```
const int idno = 1234;
```

character constants:

`const char name[]="Ravi":` ← string constant

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

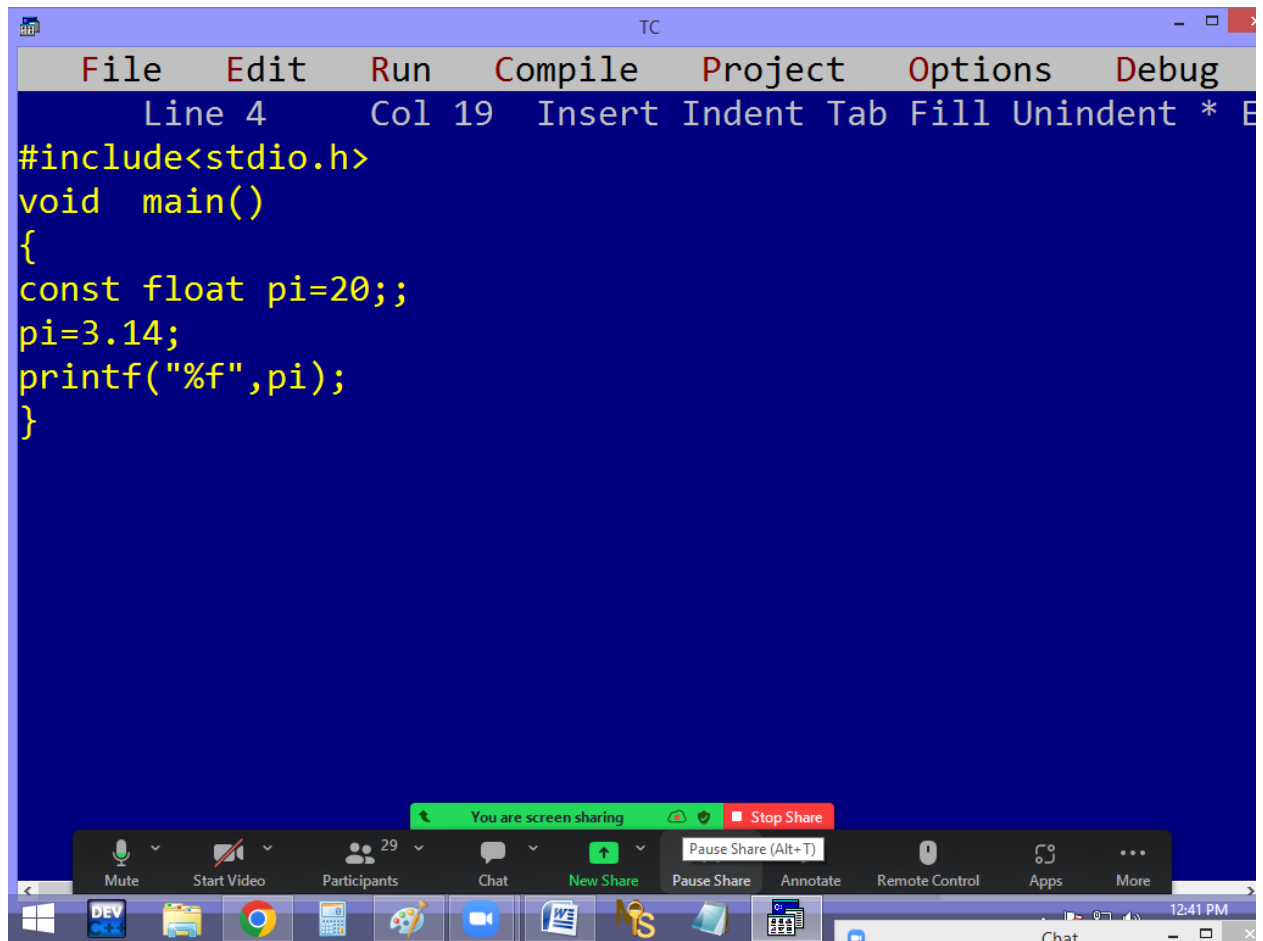


```
TC
File Edit Run Compile Project Options Debug
Line 4 Col 20 Insert Indent Tab Fill Unindent * E
#include<stdio.h>
void main()
{
const float pi=3.14;
printf("%f",pi);
}
```

You are screen sharing Stop Share

DEV File Explorer Chrome Calculator Paint Zoom Word MSN 12:41 PM Chat



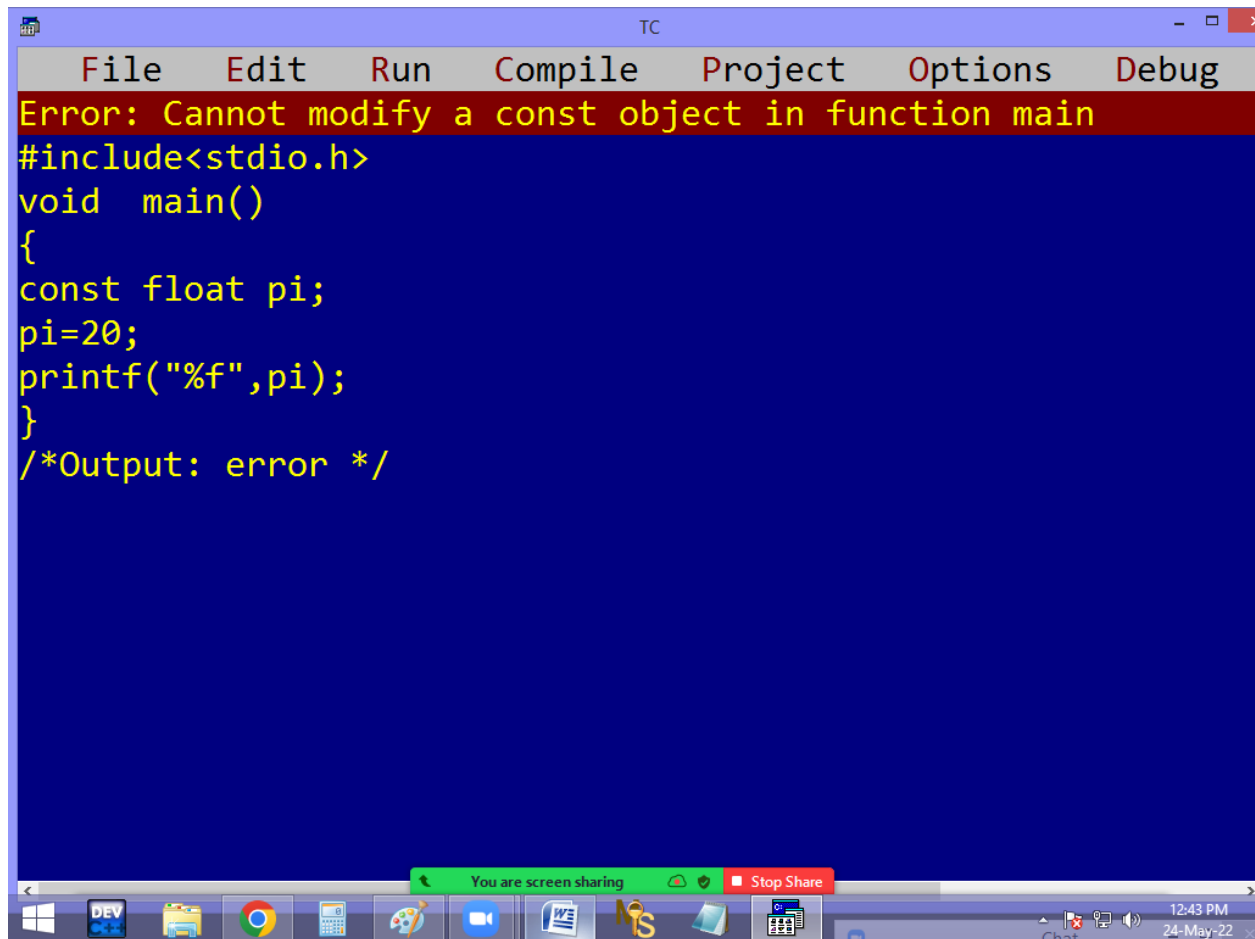


```
TC
File Edit Run Compile Project Options Debug
Line 4 Col 19 Insert Indent Tab Fill Unindent * E
#include<stdio.h>
void main()
{
const float pi=20;;
pi=3.14;
printf("%f",pi);
}
```

You are screen sharing Stop Share

Mute Start Video Participants 29 Chat New Share Pause Share (Alt+T) Annotate Remote Control Apps More

DEV File Explorer Chrome Calculator Paint Desktop Appointments Word Mail Calendar 12:41 PM Chat



The screenshot shows a Turbo C++ (TC) IDE window. The title bar says 'TC'. The menu bar includes 'File', 'Edit', 'Run', 'Compile', 'Project', 'Options', and 'Debug'. A red error message banner at the top reads: 'Error: Cannot modify a const object in function main'. The code editor has a dark blue background with yellow text. The code is as follows:

```
#include<stdio.h>
void main()
{
const float pi;
pi=20;
printf("%f",pi);
}
/*Output: error */
```

At the bottom of the window, there is a taskbar with various icons (Windows logo, DEV, folder, Chrome, calculator, paint, video call, Word, MSN, etc.) and a system tray showing the time '12:43 PM' and date '24-May-22'. A green notification bar above the taskbar says 'You are screen sharing' with a 'Stop Share' button.

keywords: The system predefined / reserved words are called keywords. Each keyword is having certain meaning and we can't change this meaning. C comes with 32 keywords.

Eg.

auto, break, char, const, case, continue, do, double, default, else, enum, extern, for, float, goto, int, long, while, switch, typedef, union, struct,.....

OPERATORS

Operator is a special symbol designed for a particular task. C comes with 44 operators and 14 separators [, . ; ; " ' ' , { }, (), < > [],.....]. Operator works on operands. Based on no of operands participating in operation, the operators divided into 3 types.

1. **Unary operator**: Require one operand.
Eg: a++, a--, ++a, --a, sizeof(a), +a, -a, ~a,....
2. **Binary operators**: Require two operands.
Eg: a+b, a-b, a>b, a<=b, a<<b, a!=b,....
3. **Ternary / Conditional operator [? :]**: Require 3 operands or expressions.
Eg: condition ? true part : false part ;

Based on operation, the operators divided into several types.