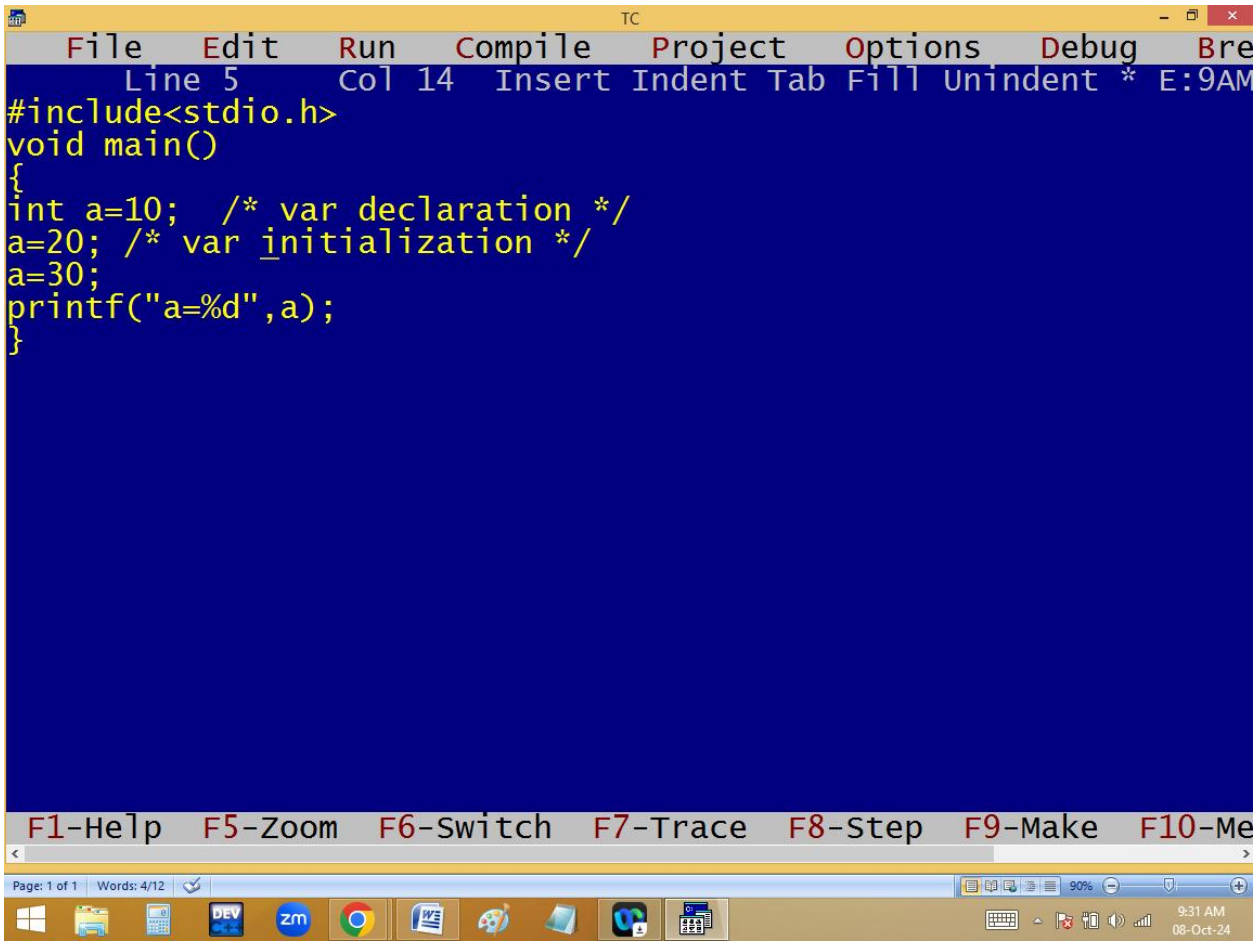
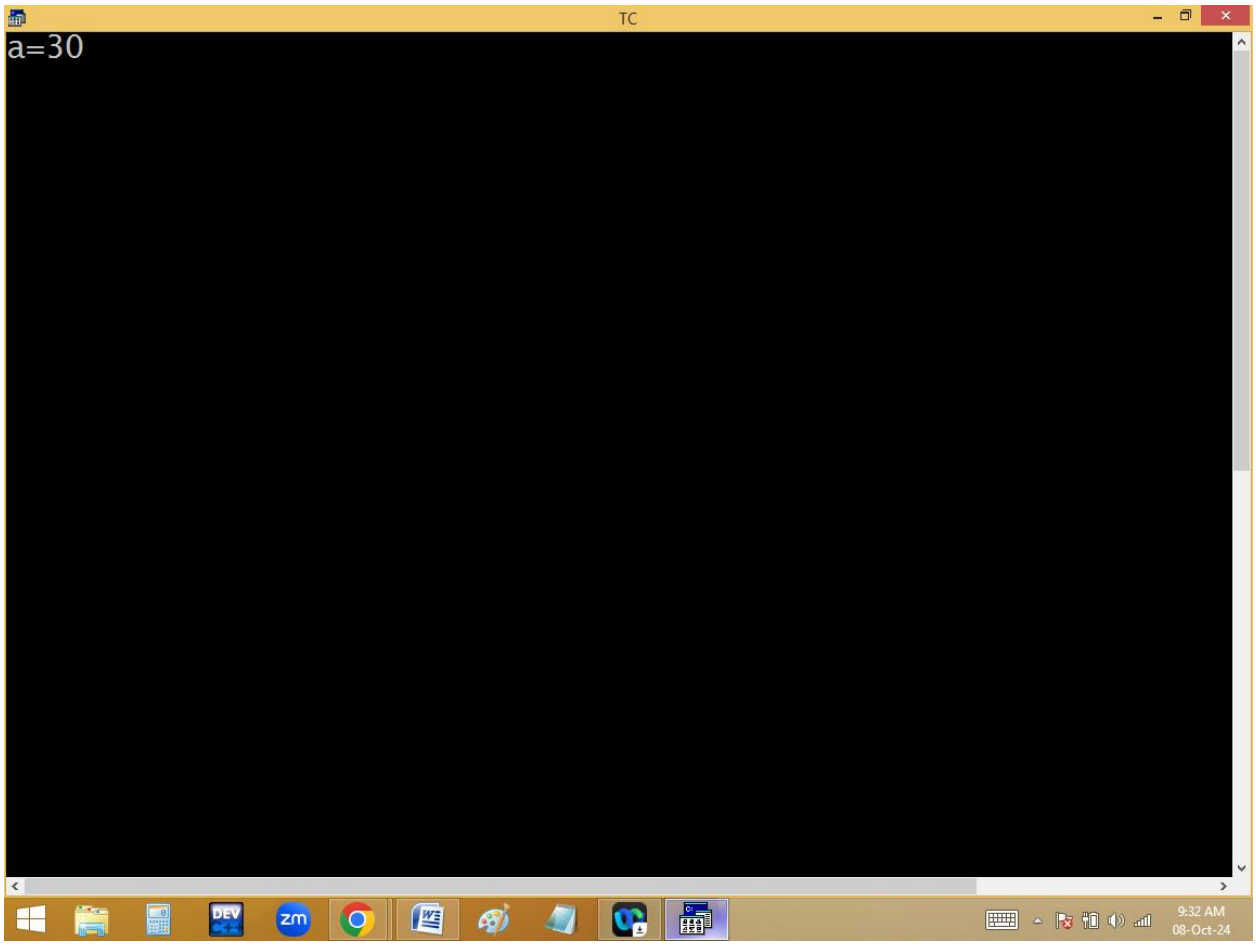
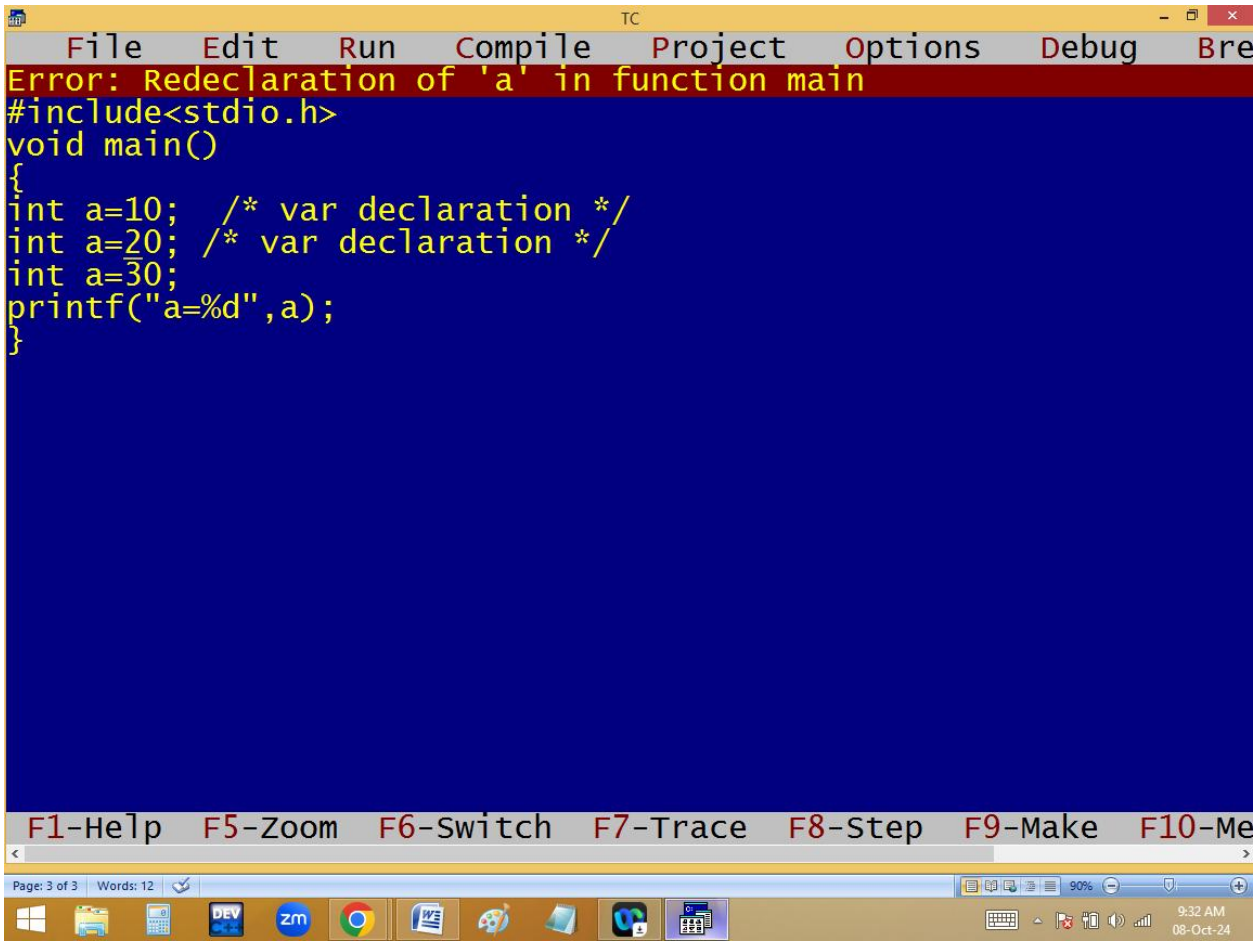
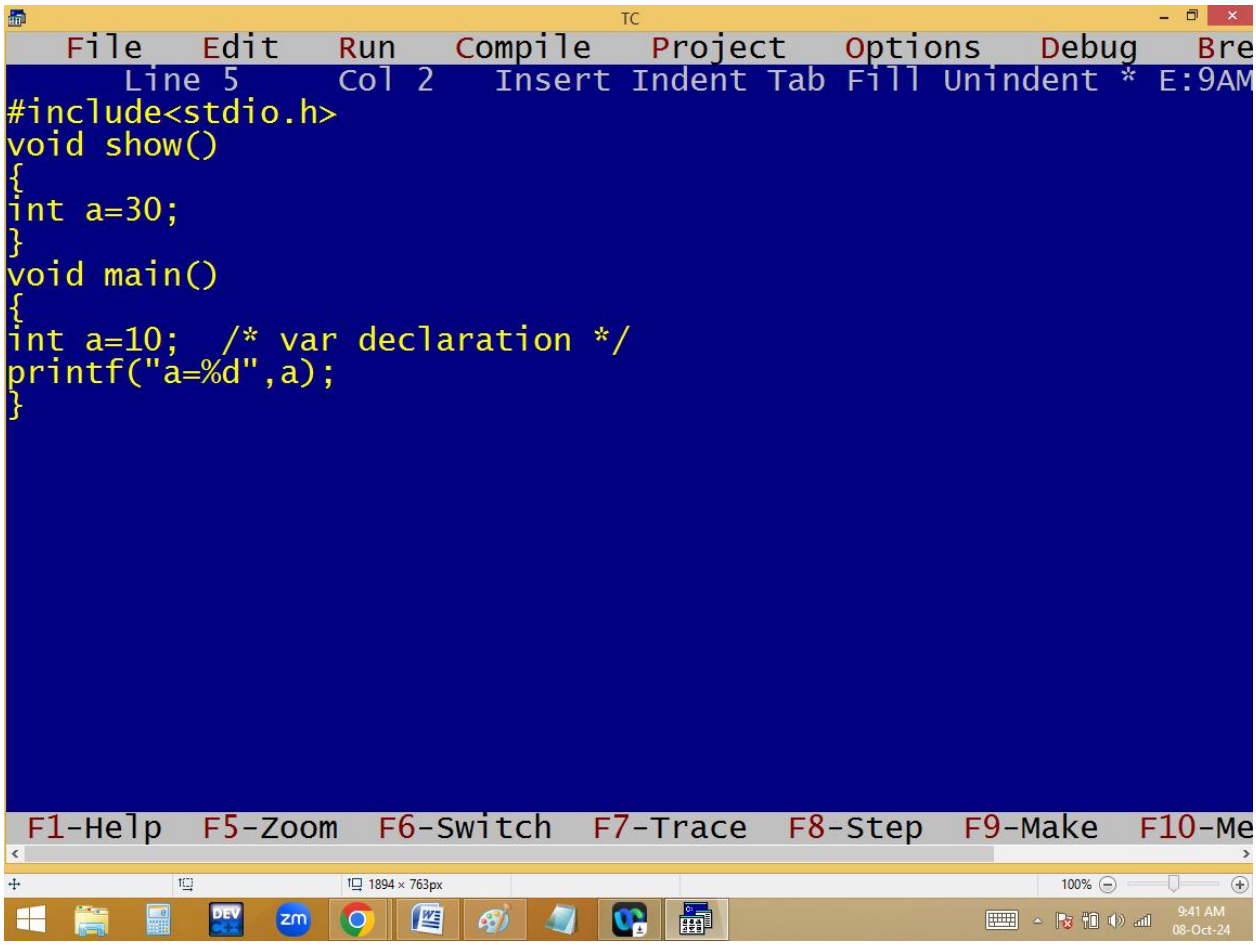
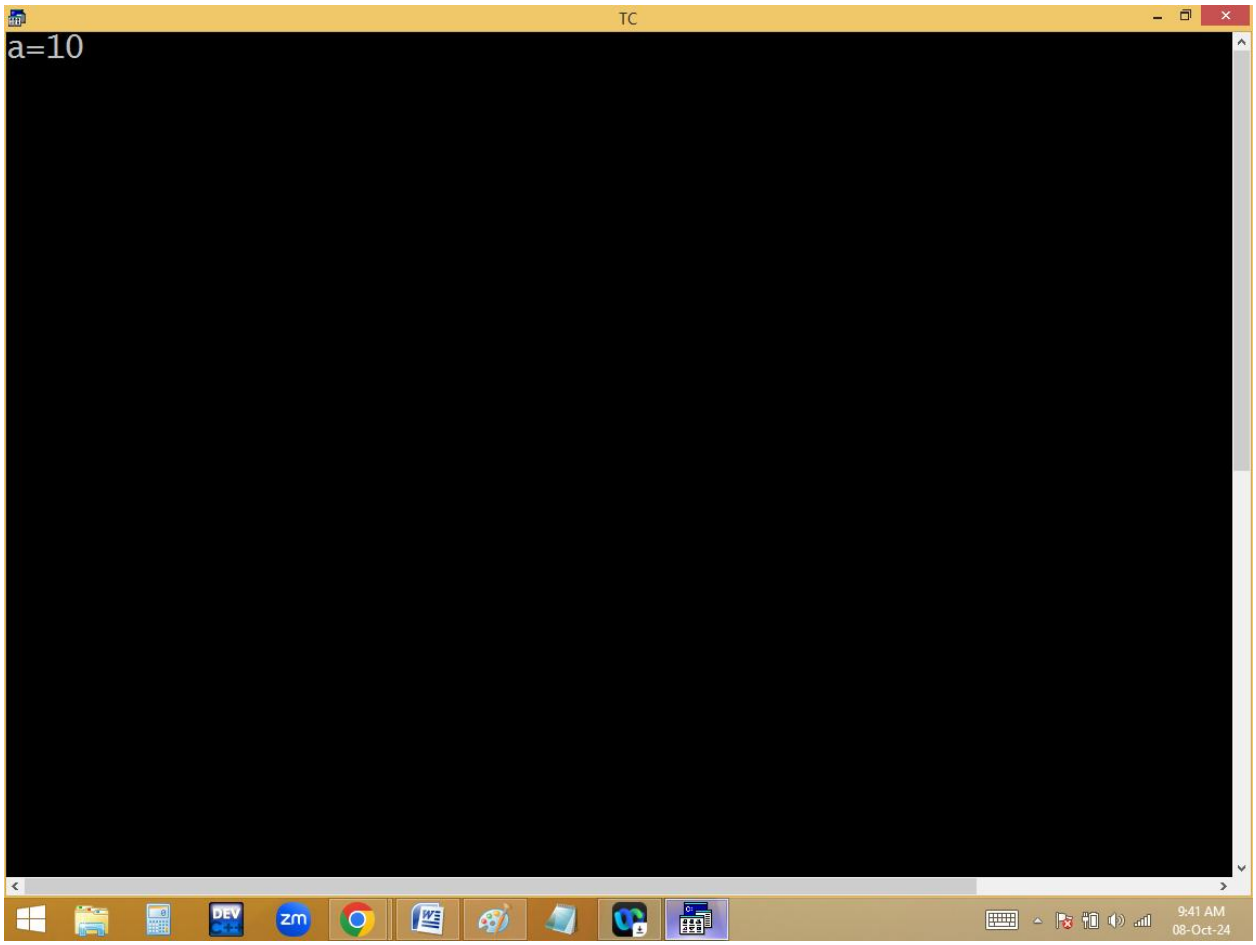
7. Duplicate names not allowed in same function or block { }.


TC
File Edit Run Compile Project Options Debug Bre
Line 5 Col 14 Insert Indent Tab Fill Unindent * E:9AM
#include<stdio.h>
void main()
{
int a=10; /* var declaration */
a=20; /* var initialization */
a=30;
printf("a=%d",a);
}
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
Page: 1 of 1
Words: 4/12
90%
9:31 AM
08-Oct-24

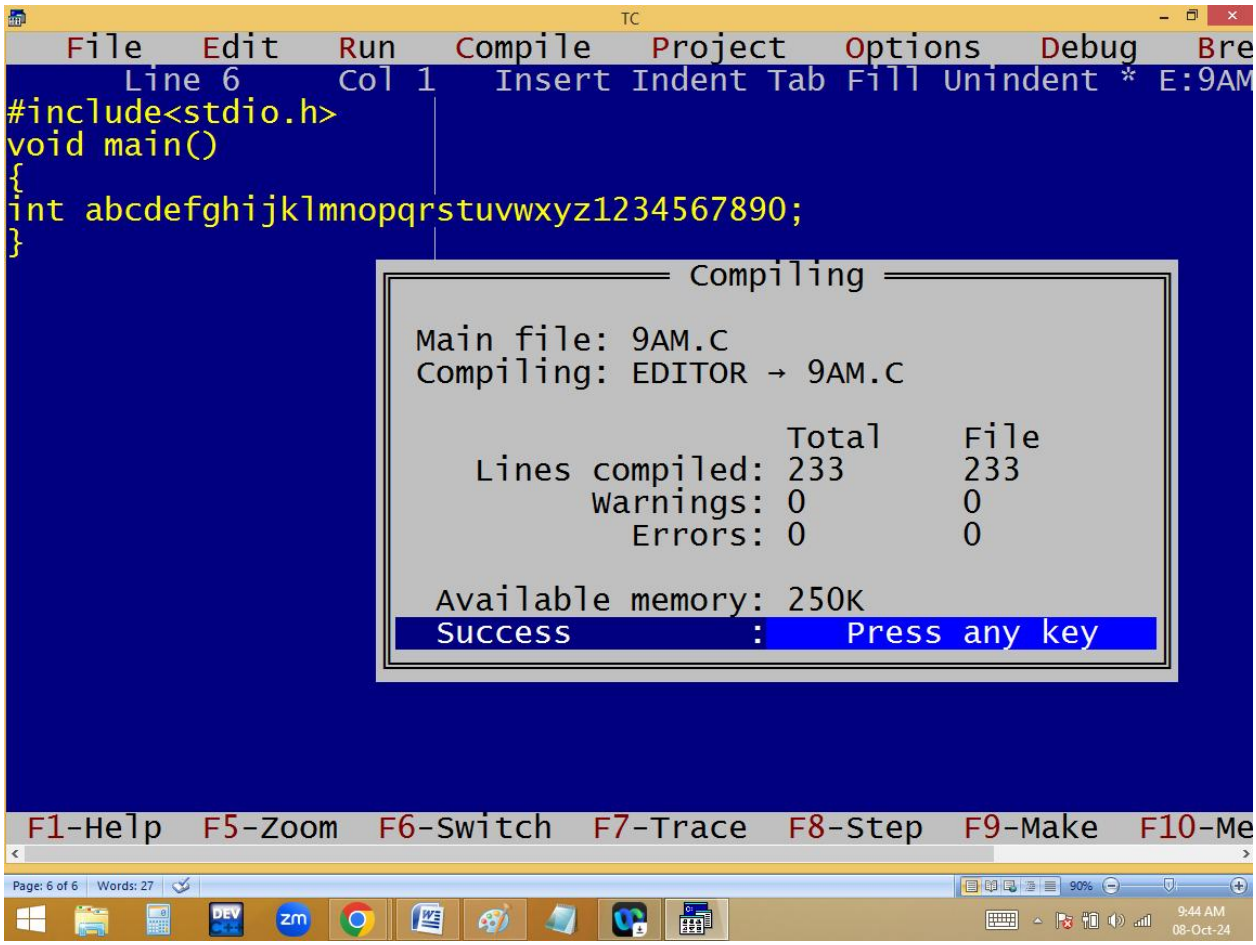

TC
a=30
9:32 AM
08-Oct-24

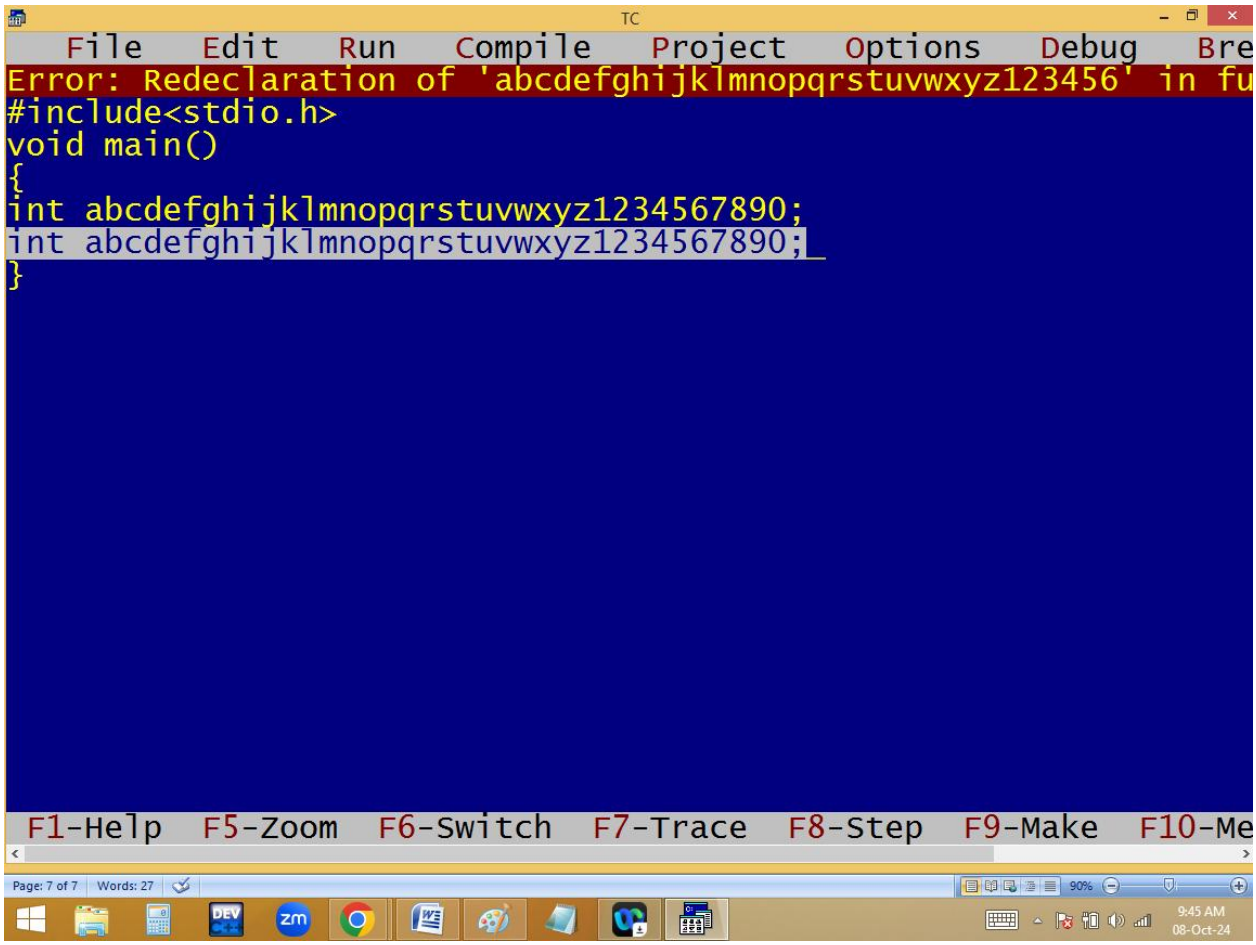

TC
File Edit Run Compile Project Options Debug Bre
Error: Redeclaration of 'a' in function main
#include<stdio.h>
void main()
{
int a=10; /* var declaration */
int a=20; /* var declaration */
int a=30;
printf("a=%d",a);
}
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
Page: 3 of 3
Words: 12
90%
9:32 AM
08-Oct-24

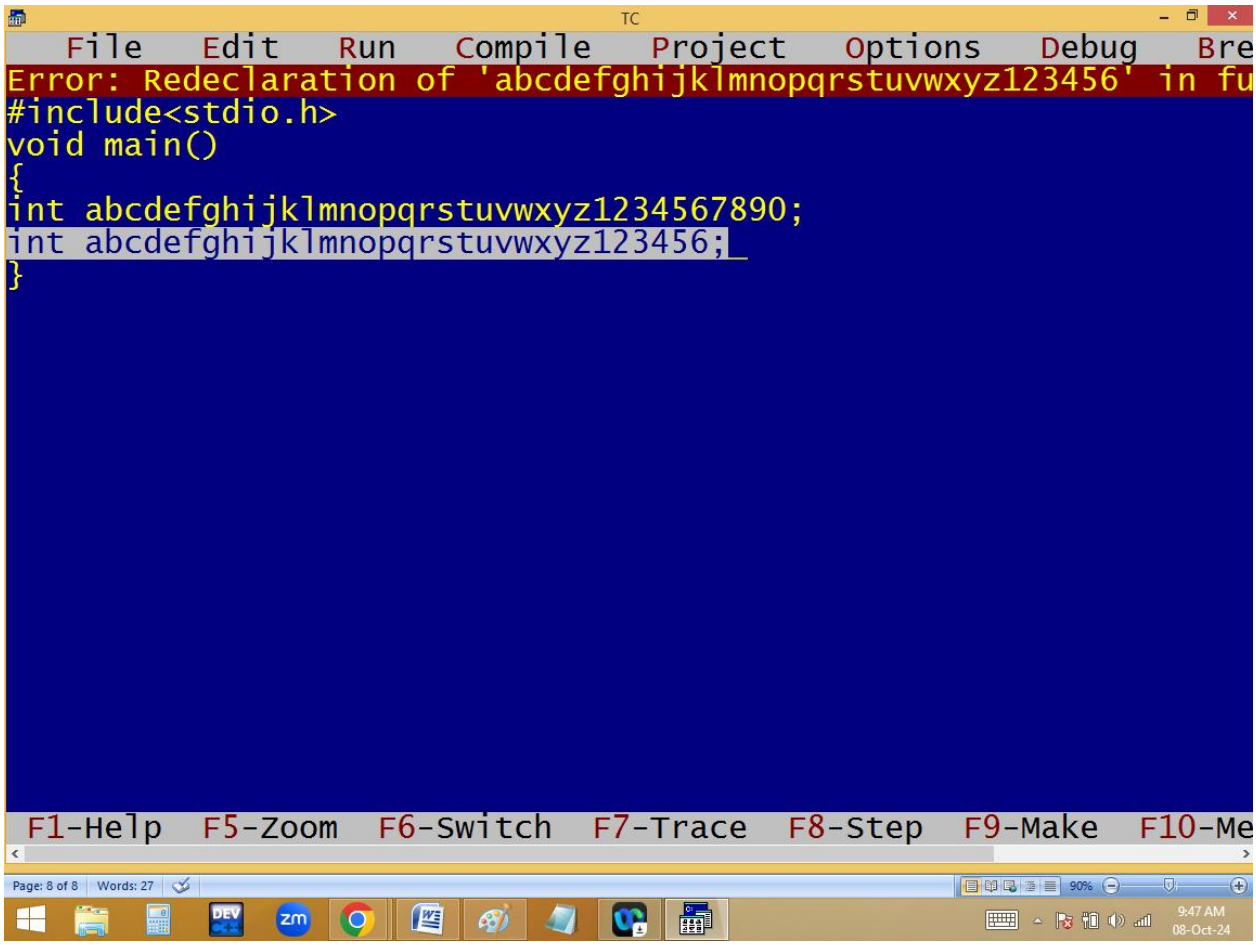

TC
File Edit Run Compile Project Options Debug Bre
Line 5 Col 2 Insert Indent Tab Fill Unindent * E:9AM
#include<stdio.h>
void show()
{
int a=30;
}
void main()
{
int a=10; /* var declaration */
printf("a=%d",a);
}
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
1894 × 763px
100%
9:41 AM
08-Oct-24

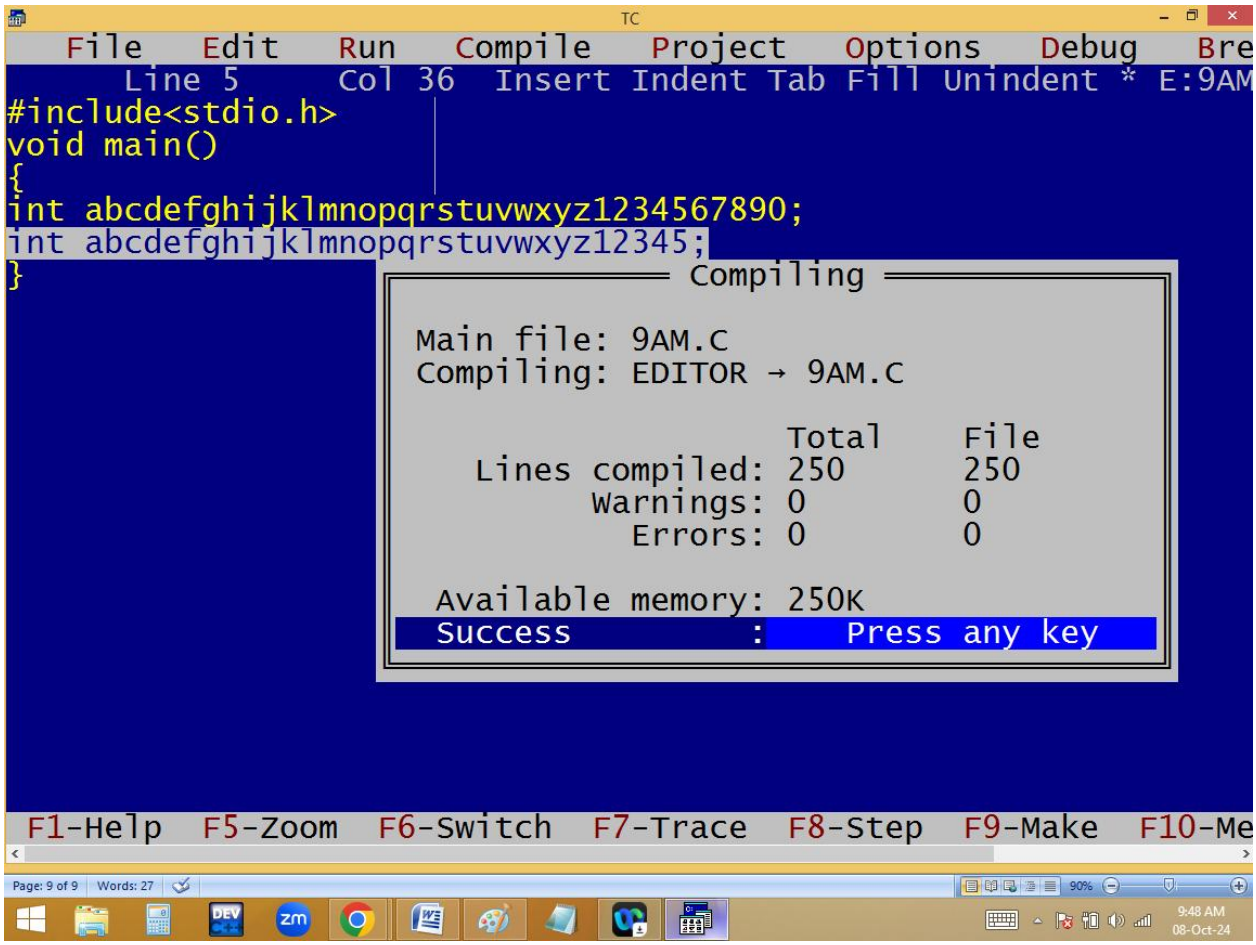


8. Name may contain up to 32 characters and excess characters ignored by the compiler.


TC
File Edit Run Compile Project Options Debug Bre
Line 6 Col 1 Insert Indent Tab Fill Unindent * E:9AM
#include<stdio.h>
void main()
{
int abcdefghijklmnopqrstuvwxyz1234567890;
}
Compiling
Main file: 9AM.C
Compiling: EDITOR → 9AM.C
Total File
Lines compiled: 233 233
Warnings: 0 0
Errors: 0 0
Available memory: 250K
Success : Press any key
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
Page: 6 of 6
Words: 27
90%
9:44 AM
08-Oct-24


TC
File Edit Run Compile Project Options Debug Bre
Error: Redeclaration of 'abcdefghijklmnopqrstuvwxyz123456' in fu
#include<stdio.h>
void main()
{
int abcdefghijklmnopqrstuvwxyz1234567890;
int abcdefghijklmnopqrstuvwxyz1234567890;
}
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
Page: 7 of 7
Words: 27
90%
9:45 AM
08-Oct-24


TC
File Edit Run Compile Project Options Debug Bre
Error: Redeclaration of 'abcdefghijklmnopqrstuvwxyz123456' in fu
#include<stdio.h>
void main()
{
int abcdefghijklmnopqrstuvwxyz1234567890;
int abcdefghijklmnopqrstuvwxyz123456;
}
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
Page: 8 of 8
Words: 27
90%
9:47 AM
08-Oct-24



3. Constants: Fixed values are called constants. We can't change a constant value during program execution. i.e. constant value should be provided at the time of declaration only.

Eg:

Numerical constants:

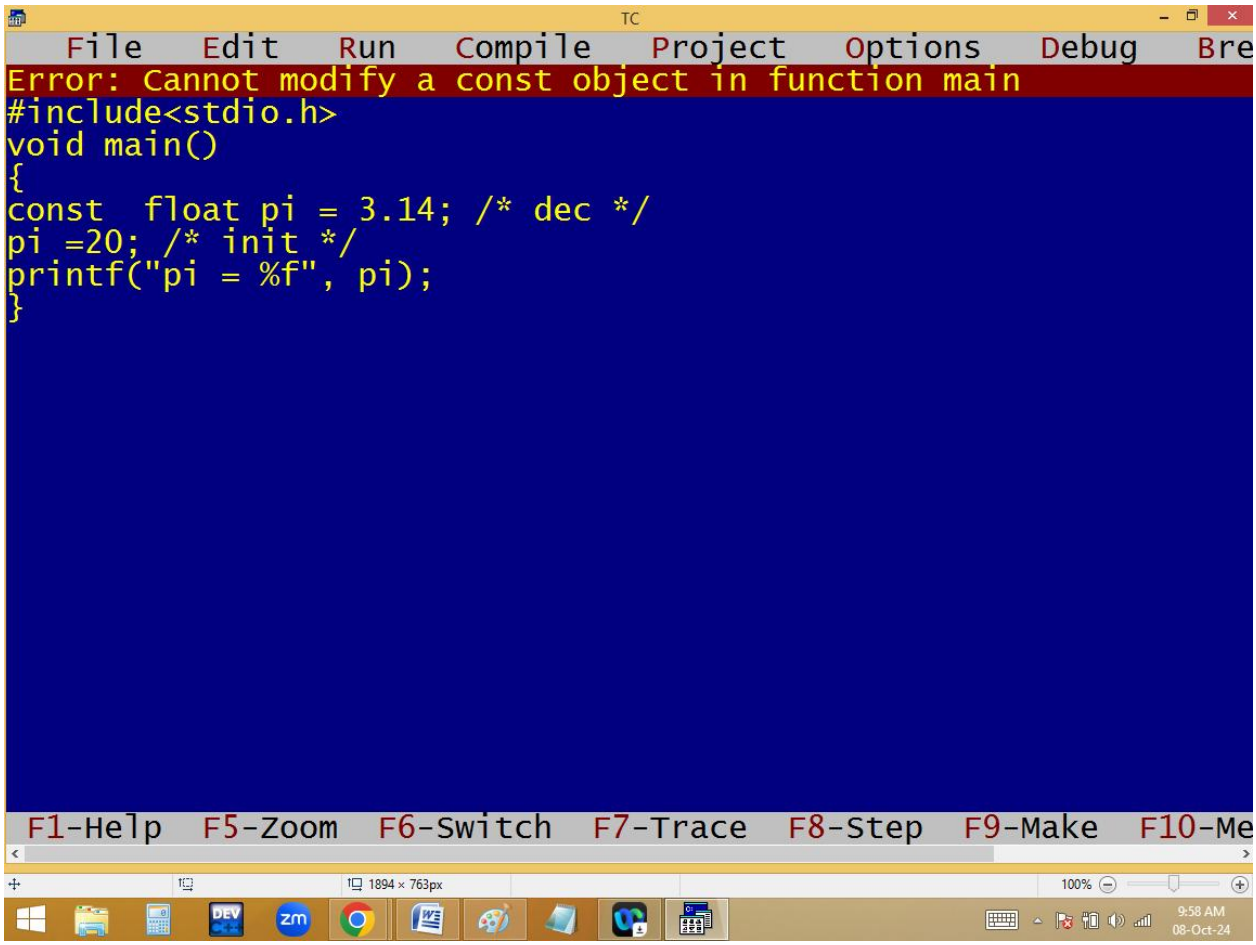
const **int** rollno=1234;

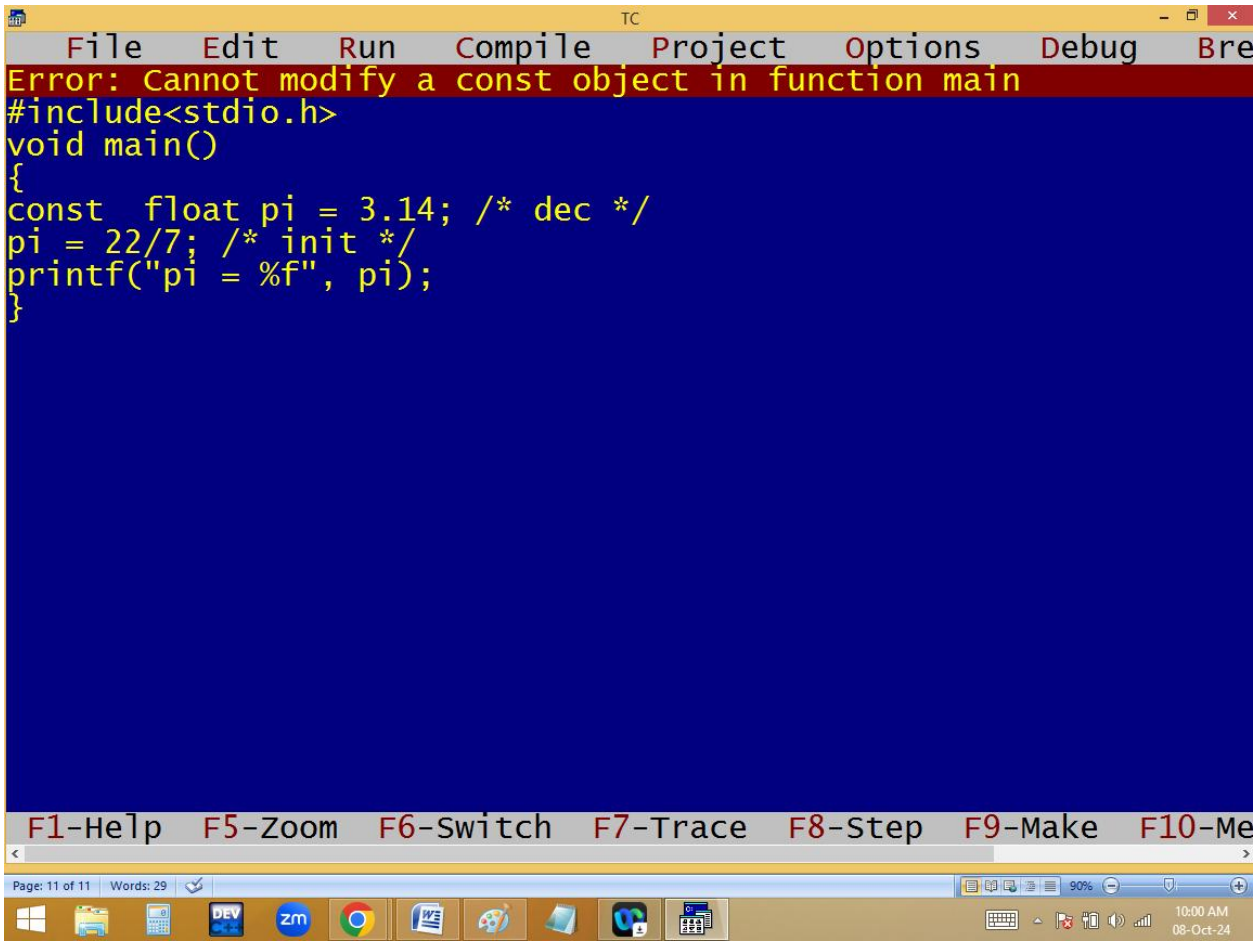
const **float** pi=3.14;

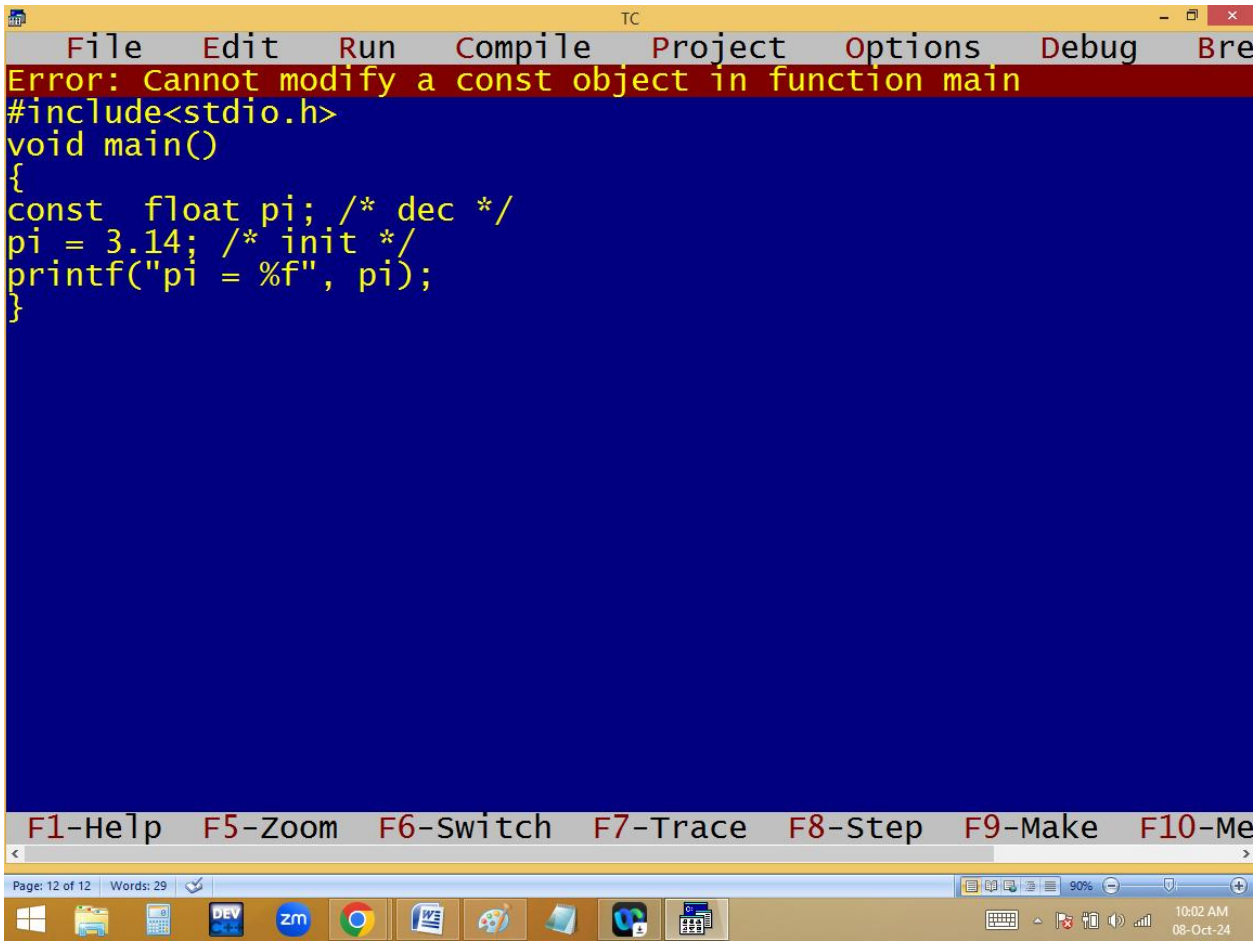
character constants:

const char name[ ]=”Ravi”; ← string

const char gender = ‘M’; ← char


TC
File Edit Run Compile Project Options Debug Bre
Error: Cannot modify a const object in function main
#include<stdio.h>
void main()
{
const float pi = 3.14; /* dec */
pi =20; /* init */
printf("pi = %f", pi);
}
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
1894 × 763px
100%
9:58 AM
08-Oct-24


TC
File Edit Run Compile Project Options Debug Bre
Error: Cannot modify a const object in function main
#include<stdio.h>
void main()
{
const float pi = 3.14; /* dec */
pi = 22/7; /* init */
printf("pi = %f", pi);
}
F1-Help F5-Zoom F6-Switch F7-Trace F8-Step F9-Make F10-Me
Page: 11 of 11
Words: 29
90%
10:00 AM
08-Oct-24



DATA TYPES

Data type determines the type of value we are going to store in our computer. To store anything in our computer, we should have to allocate the memory. This memory allocation is depended on the data type we are using.

Data type determines the properties such as

1. No of bytes
2. Range

3. Type of value

In C language we are having 3 **basic** data types

1. **Int – To store non-decimal numbers**
2. **Float – To store decimal numbers**
3. **Char – To stores alphabets, numbers and special char**

Total data types are divided into 3 types.

1. **Primitive data types**
2. **Derived data types**
3. **User defined data types**

PRIMITIVE DATA TYPES:

These are the regular data types we are using in our c programs.

Data type	Bytes	Conversion Character / format specifier	Storage Range
int / signed int / short int	2	%d	-32768 to +32767
unsigned int	2	%u	0 to 65535
long int	4	%ld	-2147483648 to 2147483647
unsigned long int	4	%lu	0 to 4294967295

float	**4**	**%f**	**$3.4 * 10^{-38}$ to $3.4 * 10^{+38}$**
double	**8**	**%lf**	**$1.7 * 10^{-308}$ to $1.7 * 10^{+308}$**
long double	**10**	**%Lf**	**$3.4 * 10^{-4932}$ to $1.1*10^{+4932}$**
char	**1**	**%c**	**1 character Signed char [-128 to +127] Unsigned char [0 to 255]**
char[10] (STRING)	**10**	**%s**	**9 char + 1 null char**
void [empty data type]			**nothing**

DERIVED DATA TYPES:

They are derived from primitive data types.

1. **Array [non-primitive]**
2. **Pointer**
3. **Function**

USER DEFINED DATA TYPES:

These are the data types created by the user.

1. structure
2. union
3. enum