```
//
//  DAY03
//  "C language"
//  Updated by Raghav Kumar on 28/11/2022
//
/*
 variables :)
 --> A variable is a name of the memory location. It is used to store
data.
 -->Its value can be changed, and it can be reused many times.

  -->Variables are just like containers for storing data values.

  -->In C, there are different types of variables (defined with
different keywords), for example:

    int - stores integers, without decimals,

    float - stores floating point numbers, with decimals,

    char - stores single characters, such as 'a' or 'B'. Char values are
surrounded by single quotes

  */
// yahan x variable ko humlog 99 as a value assign kr rhe hain
int x = 99; // type variableName = value;

int ->(type of variable)
x -> (variable name)
= -> The equal sign is used to assign a value to the variable.
99 -> (value assign to the variable)


Example1:
    Create a variable called physicsMark of type int and assign the
value 92 to it:

int physicsMark = 92;


//humlog variable k value badh me v assign kar sakte hain kuch is tarah
se

    int physicsMark;
    physicsMark = 92;

//hai na intresting ki kabhi v humlog value put kar sakte hain ab dekho

NOTE: If you assign a new value to an existing variable, it will
overwrite the previous value:


Example2:
    int physicsMark = 15;  // physicsMark is 15
    physicsMark = 10;  // Now physicsMark is 10
```

Output Variables
    //humlog ye padheen hai ki values output k liye ya text print karne k liye humlog printf() function use karte hain

//yad kro kuch aisa syntax

```
#include<stdio.h>
Int main()
{
printf(“ we are code learners”);
return 0;

}
```

// sare code k kuch issi tara k structure honge

Example3:

```
    int myNum = 15;
    printf(myNum);  // Nothing happens
```

//In many other programming languages (java ,python,c++) ye normally aise run kr jayega but C me possible nhi hain

//C be like: qki hamare yahan aisa hi hota hai

//C me variables ko print karne k liye humlogo ko "format specifiers" k bare me janna hoga

Format Specifiers:)

-->Format specifiers are used together with the printf() function to tell the compiler what type of data the variable is storing.
-->It is basically a placeholder for the variable value.

-->A format specifier starts with a percentage sign %, followed by a character.

    For example, to output the value of an int variable, you must use the format specifier %d or %i surrounded by double quotes, inside the printf() function:

Example4:

```
#include <stdio.h>
int main()
{
    int physicsMark = 15;
    printf("%d", physicsMark);  //Outputs 15
    return 0;
}
```

//full syntax maine bs yahan hi use kiya hi kuch issi tarah ka format hoga sare examples me

    To print other types, use %c for char and %f for float:

//or v bahoot types k variable hote hain jo humlog Aage padhnege

Example5:

```c
    // Create variables
    int myNum = 5;              // Integer (whole number)
    float myFloatNum = 5.99;    // Floating point number
    char myLetter = 'D';        // Character

    // Print variables
    printf("%d\n", myNum);
    printf("%f\n", myFloatNum);
    printf("%c\n", myLetter);
```

*To combine both text and a variable, separate them with a comma inside the printf() function:

//try kro isse 6 & 7

Example6:

```c
    int myNum = 5;
    char myLetter = 'D';
    printf("My number is %d and my letter is %c", myNum, myLetter);

  //  we will learn more about Data Types in the next chapter.
```

--> THODA SA YE BHI DEKH LO

Example7:

```c
    int x = 5;
    int y = 6;
    int sum = x + y;
    printf("%d", sum);

//iss code ko aise v likh skte hai yahan ek z extra variable haii
    int x = 5, y = 6, z = 50;
    printf("%d", x + y + z);

//humlog ye sab Aage padhenge
```

C Variable Names

All C variables must be identified with unique names.

These unique names are called identifiers.

Identifiers can be short names (like x and y) or more descriptive names (age, sum, totalVolume).

Note: It is recommended to use descriptive names in order to create understandable and maintainable code:

Jaise yahan dekho

```c
    //  it's Good
    int minutesPerHour = 60;
```

```
    // it's OK, but not so easy to understand what m actually is
    int m = 60;
```

10 LAKH KA NOTE:

The general rules for naming variables are:

1. Names can contain letters, digits and underscores
2. Names must begin with a letter or an underscore (_)
3. Names are case sensitive (myVar and myvar are different variables)
4. Names cannot contain whitespaces or special characters like !, #, %, etc.
5. Reserved words (such as int) cannot be used as names

**********Homework**********
1.sare example ko print kro.
2.humlogo k 5 subjects k random marks print kro such as
marks obtained in math : 50;
marks obtained in physics : 70;
****