

DAILY ASSESSMENT FORMAT

Date:	22-06-2020	Name:	Jagadeesha Hegde
Course:	C++ programming	USN:	4AL17EC036
Topic:	Basic concepts of c++	Semester & Section:	6th A-sec
Github Repository:	Jagadeesha-036		

FORENOON SESSION DETAILS

Image of session



The screenshot shows a presentation slide titled "Variables" with a blue header bar. The header bar contains a menu icon, a C++ logo, the title "Variables", and a page number "173" in a blue circle. Below the header is a navigation bar with a "1/4" indicator, a green arrow pointing right, and several question marks. The main content area has a title "Variables" and a paragraph explaining that creating a variable reserves memory and that C++ requires a data type. It then defines the **Integer** type and the **int** keyword, explaining that C++ requires specifying the type and identifier. It defines an identifier and provides an example: `int myVariable = 10;`. A yellow box at the bottom states that different operating systems can reserve different sizes of memory for the same data type.

Variables

Creating a **variable** reserves a memory location, or a space in memory for storing values. The compiler requires that you provide a **data type** for each variable you declare. C++ offer a rich assortment of built-in as well as user defined **data types**.

Integer, a built-in type, represents a whole number value. Define **integer** using the keyword **int**. C++ requires that you specify the **type** and the **identifier** for each variable defined. An **identifier** is a name for a variable, function, class, module, or any other user-defined item. An identifier starts with a letter (A-Z or a-z) or an underscore (_), followed by additional letters, underscores, and digits (0 to 9). For example, define a variable called **myVariable** that can hold **integer** values as follows:

```
int myVariable = 10;
```

Different operating systems can reserve different sizes of memory for the same data type.

C++ OOPs Concepts:

The major purpose of C++ programming is to introduce the concept of object orientation to the C programming language. Object Oriented Programming is a paradigm that provides many concepts such as inheritance, data binding, polymorphism etc. The programming paradigm where everything is represented as an object is known as truly object-oriented programming language. Smalltalk is considered as the first truly object-oriented programming language.

C++ Basic Input/Output:

C++ I/O operation is using the stream concept. Stream is the sequence of bytes or flow of data. It makes the performance fast. If bytes flow from main memory to device like printer, display screen, or a network connection, etc, this is called as output operation. If bytes flow from device like printer, display screen, or a network connection, etc to main memory, this is called as input operation.

I/O Library Header Files:

Let us see the common header files used in C++ programming are:

<iostream> It is used to define the cout, cin and cerr objects, which correspond to standard output stream, standard input stream and standard error stream, respectively.

<fstream> It is used to declare services for user-controlled file processing.

Standard output stream (cout):

The cout is a predefined object of ostream class. It is connected with the standard output device, which is usually a display screen. The cout is used in conjunction with stream insertion operator (<<) to display the output on a console

Let's see the simple example of standard output stream (cout):

```
#include <iostream>
using namespace std;
int main() {
    char ary[] = "Welcome to C++ tutorial";
    cout << "Value of ary is: " << ary << endl;
}
```

C++ Variable:

A variable is a name of memory location. It is used to store data. Its value can be changed and it can be reused many times. It is a way to represent memory location through symbol so that it can be easily identified.

Let's see the syntax to declare a variable:
type variable_list;

example:

```
int x=5,b=10; //declaring 2 variable of integer type
float f=30.8;
char c='A';
```

C++ Identifiers:

C++ identifiers in a program are used to refer to the name of the variables, functions, arrays, or other user-defined data types created by the programmer. They are the basic requirement of any language. Every language has its own rules for naming the identifiers.

Example:

```
#include <iostream>
using namespace std;
int main()
{
    int a;
    int A;
    cout<<"Enter the values of 'a' and 'A'";
    cin>>a;
    cin>>A;
    cout<<"\nThe values that you have entered are : "<<a<<" , "<<A;
    return 0;
}
```

DAILY ASSESSMENT FORMAT

Date:	22-06-2020	Name:	Jagadeesha Hegde
Course:	C++ programming	USN:	4AL17EC036
Topic:	Conditionals and loops	Semester & Section:	6th A-Sec

Github Repository:	Padmini		
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AFTERNOON SESSION DETAILS

Image of session

The screenshot shows a mobile application interface for a lesson titled "The while Loop". At the top, there is a blue header bar with a menu icon, an infinity symbol, the title "The while Loop", and a notification badge with the number "173". Below the header is a progress bar with a green play button and several question marks. The main content area has a light gray background and contains the following text:

Loops

A **loop** repeatedly executes a set of statements until a particular condition is satisfied.

A **while** loop statement repeatedly executes a target statement as long as a given condition remains **true**.

Syntax:

```
while (condition) {
    statement(s);
}
```

The loop iterates while the condition is **true**.

At the point when the condition becomes **false**, program control is shifted to the line that immediately follows the loop.

Below the text, there is a "270 COMMENTS" link. At the bottom left, there is a "Q&A" icon with a red notification badge showing "1713". At the bottom right, there is a large green circular button with a white right-pointing arrow.

IF Statement:

The C++ if statement tests the condition. It is executed if condition is true.

Syntax:

```
if(condition){  
    //code to be executed  
}
```

Example :

```
#include <iostream>  
using namespace std;  
  
int main () {  
    int num = 10;  
    if (num % 2 == 0)  
    {  
        cout<<"It is even number";  
    }  
    return 0;  
}
```

IF-else Statement:

The C++ if-else statement also tests the condition. It executes if block if condition is true otherwise else block is executed.

Syntax:

```
if(condition){  
    //code if condition is true  
}else{  
    //code if condition is false  
}
```

Example:

```
#include <iostream>  
using namespace std;  
int main () {  
    int num = 11;  
    if (num % 2 == 0)  
    {
```

```

        cout<<"It is even number";
    }
    else
    {
        cout<<"It is odd number";
    }
    return 0;
}

```

While loop:

In C++, while loop is used to iterate a part of the program several times. If the number of iteration is not fixed, it is recommended to use while loop than for loop.

Syntax:

```

while(condition){
//code to be executed
}

```

Example:

```

#include <iostream>
using namespace std;
int main() {
    int i=1;
    while(i<=10)
    {
        cout<<i <<"\n";
        i++;
    }
}

```

Do-While Loop:

The C++ do-while loop is used to iterate a part of the program several times. If the number of iteration is not fixed and you must have to execute the loop at least once, it is recommended to use do-while loop. The C++ do-while loop is executed at least once because condition is checked after loop body.

Syntax:

```
do{  
    //code to be executed  
}while(condition);
```

Example:

```
#include <iostream>  
using namespace std;  
int main() {  
    int i = 1;  
    do{  
        cout<<i<<"\n";  
        i++;  
    } while (i <= 10) ;  
}
```

For Loop:

The C++ for loop is used to iterate a part of the program several times. If the number of iteration is fixed, it is recommended to use for loop than while or do-while loops. The C++ for loop is same as C/C#. We can initialize variable, check condition and increment/decrement value.

Syntax:

```
for(initialization; condition; incr/decr){  
    //code to be executed  
}
```

Example:

```
#include <iostream>  
using namespace std;  
int main() {  
    for(int i=1;i<=10;i++){  
        cout<<i <<"\n";  
    }  
}
```
