

Assignment

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- ▶ Implement and Understand Bubble Sort Algorithm using For Loop.

```
while(condition) {  
    while(condition) {  
        // statement of inside loop  
    }  
    // statement of outer loop  
}
```

Syntax of Nested While

```
int i=1;
int j;

while(i<=5){
    j=1;
    cout<<"Multiplication Table of: "<<i<<endl;
    while(j<=10){
        cout<<i<<"*"<<j<<"="<<i*j<<"\n";
        j+=1;
    }
    i++;
}
```

Nested While

Syntax of Nested do while

```
do{  
  
    do{  
  
        // statement of inside loop  
    }while(condition);  
  
    // statement of outer loop  
}while(condition);
```

Class Activity

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A large, highly reflective yellow sphere sits on a white surface, casting a soft shadow. To its right, a much smaller, reflective silver sphere is partially visible, also on the same surface. The background is a plain, light gray.

No Restriction on
Nesting Level
and type of loop

Jump Statements

- ▶ Jump statements manipulate the flow of program if some conditions are met
- ▶ Four Types:
 - ▶ Break
 - ▶ Continue
 - ▶ Goto
 - ▶ Return

Continue

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Used inside for, while or do while loop

Executes some parts of the loop, while skipping others

Used with a conditional statement which must be present inside a loop


```
// C++ program to demonstrate the
// continue statement
#include <iostream>
using namespace std;

// Driver code
int main()
{
    for (int i = 1; i < 10; i++) {

        if (i == 5)
            continue;
        cout << i << " ";
    }
    return 0;
}
```

Example

Break



C++ break statement is used with loops and cases of a switch statement.



It forces the loop to terminate, upon meeting a condition



Used with a conditional statement in loop

```
// C++ program to demonstrate the
// break statement
#include <iostream>
using namespace std;

// Driver Code
int main()
{
    for (int i = 1; i < 10; i++) {

        // Breaking Condition
        if (i == 5)
            break;
        cout << i << " ";
    }
    return 0;
}
```

Example

Return

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It terminates the entire function, and it is stronger than a break statement

Can be used with or without conditionals

```
// C++ program to demonstrate the
// return statement
#include <iostream>
using namespace std;

// Driver code
int main()
{
    cout << "Begin ";

    for (int i = 0; i < 10; i++) {

        // Termination condition
        if (i == 5)
            return 0;
        cout << i << " ";
    }
    cout << "end";

    return 0;
}
```

Example

Goto statements

- ▶ C++ goto statement can take control to any part of the program
- ▶ C++ goto statement has a label associated with it
- ▶ The label can be written anywhere, before goto or after goto

Syntax of goto

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Syntax

```
goto label_name;  
.  
.  
.  
label_name:
```

```
// C++ program to demonstrate the
// goto statement
#include <iostream>
using namespace std;

// Driver Code
int main()
{
    int n = 4;

    if (n % 2 == 0)
        goto label1;
    else
        goto label2;

label1:
    cout << "Even" << endl;
    return 0;

label2:
    cout << "Odd" << endl;
}
```

Example