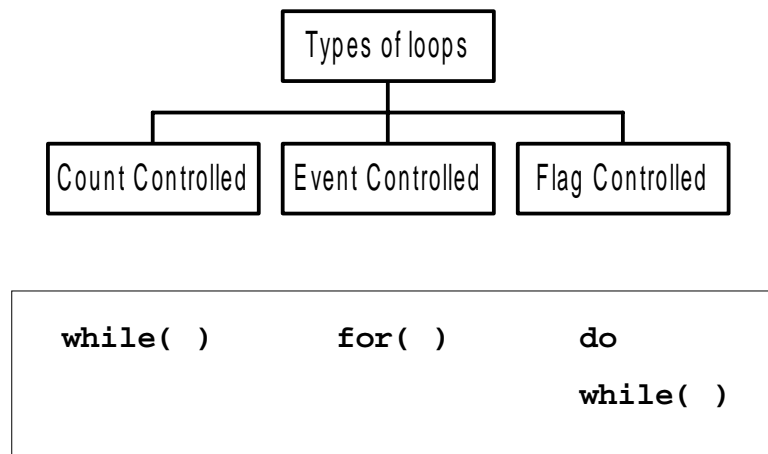


Loops



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Essential Components of a loop

1. Priming read or Initialization
2. Test
3. Update or Increment

```
int StuCount = 1;
while(StuCount <= 29)
{
    FindGrade(StuCount);
    ++StuCount;
}
```

```
ifstream inFile;
inFile.open("input.txt");
int x, Sum = 0;
inFile >> x;
while(inFile)
{
    Sum = Sum + x;
    inFile >> x;
}
```

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For Loop

While loop

```
int StuCount = 1;
while(StuCount <= 29)
{
    FindGrade(StuCount);
    ++StuCount;
}
```

Equivalent For loop

```
for (int StuCount = 1; StuCount <=29; ++StuCount)
    FindGrade(StuCount);
```

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Do-While Loop

In **while()** the loop body is executed zero or more times.

In **do-while()** the loop body is executed one or more times

Using while

```
cout<<"Enter a number"<<endl;
int x;
cin >> x;
while (x!=0)
{
    cout<<"Enter a number"<<endl;
    cin >> x;
}
```

Using do-while

```
int x;
do
{
    cout<< "Enter a number"<<endl;
    cin >> x;
}
while(x != 0)
```

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CS 1344