Loops

Types of loops

- Count Controlled
- Event Controlled
- Flag Controlled

while() for() do
while()

Essential Components of a loop

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

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

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

For Loop

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

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

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

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

Using do-while

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