

```
#include <iostream>
using namespace std;
// comments
// with your name, class
// purpose of the program
int main()
{
    //program
    return 0;
}
```

# Variables

- hold some data
- name
  - letters (a-z, A-Z), digits (0-9)
  - underscores
  - Start with a letter

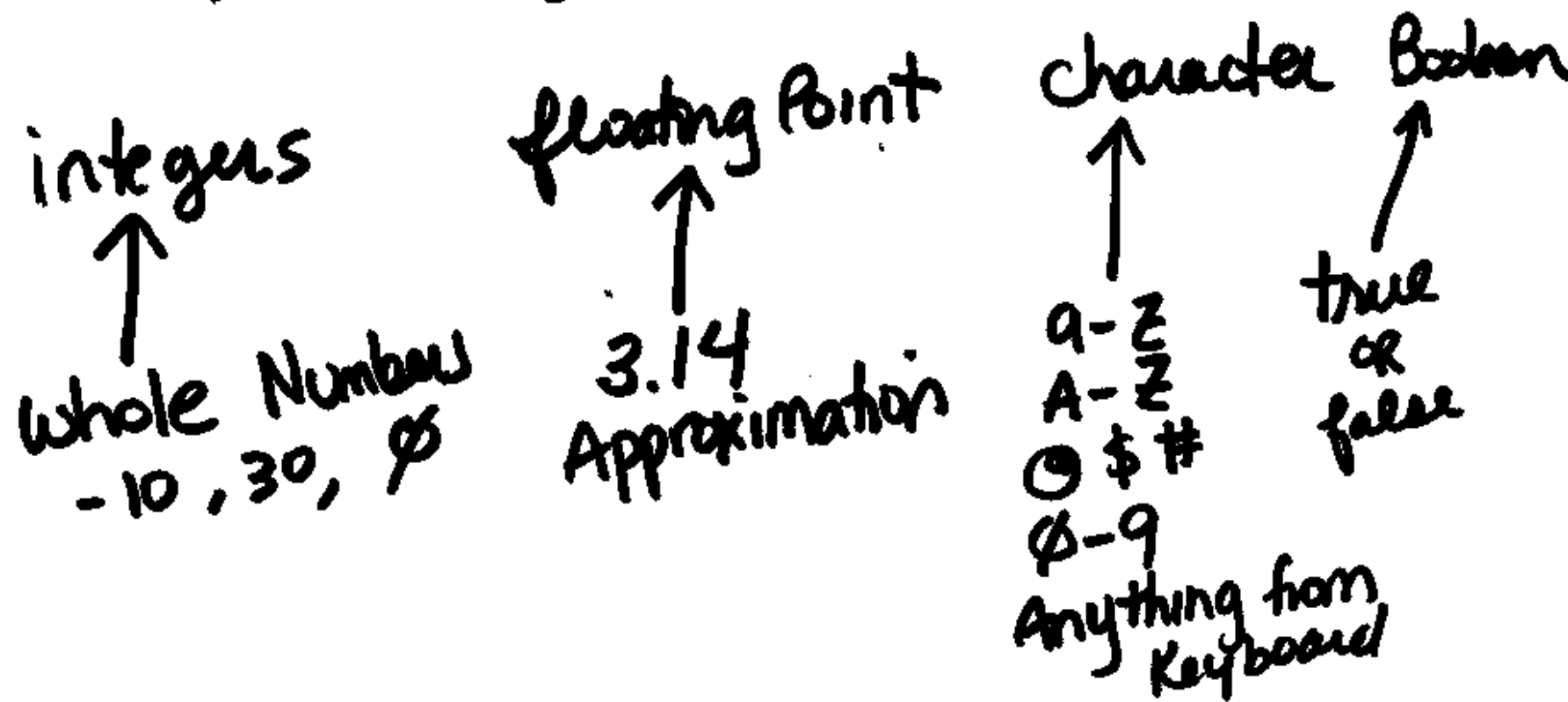
inches  
num\_of\_inches  
first name  
FirstName

CASE SENSITIVE

- Boolean  
true  
or  
false  
  
m  
vel

# C, C#, JAVA

## Data types



# Integers

int  
long  
short

initializing  
the variable

Create a Variable

```
int age;
```

vs.

```
int age =  $\emptyset$ ;
```

"gets the value"



age



# floating Point - Real Numbers

Data Types

float

double

vs. float inches;  
or  
float inches =  $\phi.\phi$ ;

$\phi\phi$

?

# Characters

---

Data Type

char

↑  
1 character

# ASCII

0101  
bits

char middle\_initial;



char value = 'a';

↑  
single quotes

2  
Keyboard

boolean data type

```
bool variable_name;
```

```
bool again = true;
```

```
#include <iostream>
using namespace std;
```

```
// comments
```

```
int main()
```

```
{
```

```
    // convert inches to mm
```

```
    float inches;
```

```
    // hold number of inches
```

```
    float mm;
```

```
    // hold the result in  
    millimeters
```

100

?

```
    // Ask the user for the inches
```

```
    // Prompt
```

```
    cout << "Please enter the number of inches";
```

```
    cin
```

```
    >> inches;
```

```
    cin.get();
```

↑  
throws the newline  
away

"see out"

"see in"

↑

←

→

↑



Assignment  
Statement

MUST  
BE A  
VARIABLE

store  
mm = inches \* 25.4;

"gets the value"

math

MULTIPLICATION



cout << inches << "inches"

←

<< "equals" << mm

<< "mm"

← cin.get();

return φ;

}