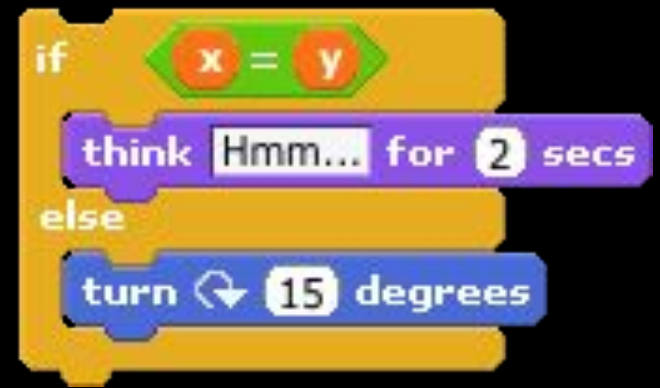


# Conditions and Boolean Expressions



# If

```
#include <cs50.h>
#include <stdio.h>

int main(void)
{
    printf("Give me an integer: ");
    int n = GetInt();

    if (n > 0)
        printf("You picked a positive number!\n");
}
```

# Boolean Expressions

<

<=

>

>=

==

!=

!

Evaluates to either  
true or false.

# Combining Boolean Expressions

Logical OR: ||

```
if (x < 0 || x > 100)
{
    printf("invalid\n");
}
```

Logical AND: &&

```
if (x >= 0 && x <= 100)
{
    printf("valid\n");
}
```

# If... Else

```
int main(void)
{
    printf("Give me an integer: ");
    int n = GetInt();

    if (n > 0)
    {
        printf("You picked a positive number!\n");
    }
    else
    {
        printf("You picked a negative number!\n");
    }
}
```

# If... Else if... Else

```
int main(void)
{
    int n = GetInt();

    if (n > 0)
    {
        printf("You picked a positive number!\n");
    }
    else if (n < 0)
    {
        printf("You picked a negative number!\n");
    }
    else
    {
        printf("You picked 0!\n");
    }
}
```

```
int main(void)
{
    printf("Enter your grade: ");
    int n = GetInt();

    if (n > 90)
    {
        printf("You got an A!\n");
    }
    if (n > 80)
    {
        printf("You got a B!\n");
    }
    if (n > 70)
    {
        printf("You got a C!\n");
    }
}
```

# Switch Statements

```
int main(void)
{
    printf("Give me an integer between 1 and 3: ");
    int n = GetInt();

    switch (n)
    {
        case 1:
            printf("You picked a low number.\n");
            break;
        case 2:
            printf("You picked a medium number.\n");
            break;
        case 3:
            printf("You picked a high number.\n");
            break;
        default:
            printf("Invalid.\n");
            break;
    }
}
```



# Ternary Operator

```
#include <cs50.h>
#include <stdio.h>

int main(void)
{
    printf("Give me an integer: ");
    int n = GetInt();

    string s = (n > 100) ? "high" : "low";

    printf("You picked a %s number!\n", s);
}
```