CPSC 231
Introduction to Computer Science for Computer Science Majors I

Branching (if)

October 2, 2014

UNIVERSITY OF CALGARY

Branching: simple if

- Simple **if** structure:

```
if (Boolean expression):
    body
```

Example: if1.py

```
secretNumber = 7
guess = int(input("Guess the number between one and ten: "))
if(secretNumber == guess):
    print("Correct!")
    print("\aBeep!\a")

print("Thanks for playing")
```

Example: Boolean.py

```
coolPerson = False
color = input("Favorite color? ")
age = int(input("Age? "))
if (color == "blue"):
    coolPerson = True
if (age >= 0):
    coolPerson = True

# Alternatively if (coolPerson):
if (coolPerson == True):
    print("Cool!")

print("End of program")
```

Now you do

- Write a program that will ask the user for their highest grade level completed.
- The program will error check the range.
- If the grade level is 13 then the program should display a message indicating the student was schooled in Ontario.
- If the grade level is not between 0 – 13 then the program should display a suitable error message
- Nothing particular is needed if the user enters a value between 1 – 12 although students can handle this case if they wish.

Example: schooling program

```
MIN_GRADE_LEVEL = 0
ONTARIO_MAX = 13

gradeLevel = int(input("What was the highest year of schooling
completed (0-13): "))
if (gradeLevel == ONTARIO_MAX):
    print("Ah I see you hail from Ontario")
if (gradeLevel < MIN_GRADE_LEVEL):
    print("Grade level must be a value between %d-%d" %
(MIN_GRADE_LEVEL,ONTARIO_MAX))
if (gradeLevel > ONTARIO_MAX):
    print("Grade level must be a value between %d-%d" %
(MIN_GRADE_LEVEL,ONTARIO_MAX))
```

Branching: if-else

- **If-else** structure:

```
if (Boolean expression):
    body
else:
    body
```

Example: if2.py

```
secretNumber = 7
guess = int(input("Guess the number between one and ten: "))
if(secretNumber == guess):
    print("Correct!")
    print("\aBeep!\a")
else:
    print("Incorrect")
print("Thanks for playing")
```

Find the problem: if3.py

```
secretNumber = 7
guess = int(input("Guess the number between one and ten: "))
if(secretNumber = guess):
    print("Correct!")
    print("\aBeep!\a")
else:
    print("Incorrect")
print("Thanks for playing")
```

assignment 2

- Due Friday Oct 3, 4p.m.
- Available on the course website.