

## Task 1:

The past few weeks have been surprisingly pleasant, lacking the miserably hot weather we might expect in August. Unfortunately, not only can it be miserably hot, but it can also be miserably cold. Let's let the computer help us figure out if it's nice outside, or not.

If it's  $\geq 90$  degrees, your program should print "Too hot". If it's  $\leq 20$  degrees, your program should print "Too cold". Otherwise, your program should print "Today might be a good day to go outside".

## Task 2:

We'll expand on the idea from the previous task, and see if we can use the computer to get some advice on what to do outside, based on the weather. If it's less than 20 degrees, your code should print "Skiing". If it's less than 50, it should print "Hiking". Above 50 degrees, and it should print "Jogging". Above 80, it should print "Swimming".

**Important** – In the first task, the possibilities were *mutually exclusive* (only one could be true at once). This is not true here. Make sure your code only ever prints a *single* activity.

## Task 3:

Squirrels like to store up acorns and other nuts during the fall, which they can then eat over the winter. For this problem, imagine that squirrels start nut collecting in August, and like to collect *at least 50 more nuts* by the end of every month, until November. That is, by the end of August, a squirrel should have collected 50 nuts; by the end of September, 100; by the end of October, 150, and so on.

Here, we'll write some code that determines, based on variables `what_month` and `how_many_nuts` whether a squirrel has stored up enough nuts for that month. For example, if `what_month` is "August" and `how_many_nuts` is 57, your code should print `True`. If `what_month` is "October" and `how_many_nuts` is 113, it should print `False`.

As a bonus while you work through the problem, here's a picture of two squirrels collecting nuts:



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#### **Task 4 (if you have time):**

Let's take our scenario from Task 2 and expand it a bit, to use compound conditionals so that we don't try to go swimming during a tornado, or flying a kite during a lightning storm (unless you're Ben Franklin, this is generally considered to be a Bad Idea).

Consider the following set of rules deciding what to do:

- When it's hot and sunny, it might be a good weekend to go swimming
- If it's windy, but not cold, maybe we could go to the park and fly a kite
- If it's not raining, and neither too hot nor too cold, we could go for a hike
- If it's sort of cold and snowing, we could go skiing
- If it's very cold, perhaps best to stay inside

Remember, you can use the `==` operator to check if a variable is equal to a value, and `!=` to check if a variable is *not* equal to a value. You can decide on the cutoffs for "hot" "sort of cold" and "very cold". Make sure your code prints the activity to do, and only prints a *single* activity. You might need to use parentheses to enforce the proper order of operations for some of the conditions