Answer Key:

1. Why do we use classes in programming ? (Is it b/c we like making more complicated code)

Classes:

* **Help keep our code more organized.** Things that relate to each other are keep together, so our code doesn’t become convoluted.
* **Allow us to use less variables**. For example, the 6 variables below could have been done with 2 class objects.

#Object 1

Name1 = tom

Age = 23

Grade = A

#Object 2

Name2 = james

Age = 21

Grade = B

* **Make our code more reusable**. If we were to update or pivot our program, for the most part we wouldn’t have to start all over again if we still needed to use features in our program. Say I have a program named ball to make a basketball game and had a fancy class to create the object ball. If we were to write a program for a baseball game, chances are we could use the old class from our previous program.
* **Allow teams to work on separate parts of the program with very little work to merge the parts together**

1. Define a class named student. The constructor will only take in one argument, a name of a person.
2. With the same class student, create a class function called “reverse” that prints out the name in reverse. Hint: use a for loop
3. Create an object of this class and pass it your name (Bryan or Amrutha). Next, call the reverse function.

A screenshot of a cell phone

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Part 2: Dictionaries

1. Give an example of when we would a dictionary to help use program something ?
2. To count the number of times an element appears (survey)
3. To store users and their data together (all social media)
4. Create an empty dictionary

dict = {}

1. What do dictionaries store as a pair?
2. value, key
3. class, value
4. object, key
5. key, value
6. How do you access data in a dictionary ?

Value = Dict[key]

1. Create a dictionary with 4 elements in it. The first part of the pair will be a number. The second will be a letter.

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