Starter - Records

These tasks are designed to refresh the reading and research you have undertaken at home prior to this lesson. If you have not completed the R&R assignment then please speak to your teacher before attempting these exercises.

Task 1 - Code Review

What will happen when the program below is run and a user enters the following information at the prompts:

- USA
- Washington

```
#define record
class Country:
    def __init__(self):
        self.name = 'UK'
        self.capital = 'London'
#main program
country = Country()
country_name = input('Enter the name of the next country: ')
country_capital = input('Enter the name of the capital city: ')
print('The capital of {0} is {1}.'.format(country.name, country.capital))
```

*country = Country() tells the program to store the information in the class 'country', and then the user inputs USA in country_name and Washington in country capital. These are stored as records in the Country class. Because the variables werent changed UK and London will still be printed.

Task 2

What change or changes would correct the problems with the following definition of Student:

```
class Student:
def __init__(self):
    name = '-'
    tutor = ''
```

instead of name = "-" and tutor = "", it should say self.name = None, self.tutor = None

Task 3

How many GamePlayers are there after running the following program? How could this be improved?

```
#define record
class GamePlayer:
        def __init__(self):
            self.name = ''
```

```
            self.ability = ''

#main program
for index in range(3):
        character = GamePlayer()
        character_name = input("Enter the name of your character: ")
        character.name = character_name
        character_ability = input("What is your character's special ability? ")
        character.ability = character_ability
        print("Character {0} has been created".format(character.name))
```

There will be 1 player because every time it runs it will overwrite the previous character record. This could be improved by putting character.name = input("Enter the name of the character: ") rather than having character.name = character_name. Same goes for character.ability = input("What is your character's special ability? "). There should be a character list so it doesnt overwrite every time.

Task 4

What will happen when the following program is run? What change or changes would improve it?

```
class GBAthlete:
    def __init__(self):
        self.name = '-'
        self.event = '-'
        self.medal = None

#main program
#create relay team
relay_team = []
#add athletes to relay team
for index in range(4):
    athlete = GBAthlete()
    athlete.name = input('Name of athlete: ')
    athlete.event = '4 x 100m (men)'
    relay_team.append(athlete)
#print relay team members and event
for index in range(1,len(relay_team)):
    print('{0} is in the {1}'.format(relay_team[index].name, relay_team[index].event))
```

*The program will store 4 different athletes with their event and medal as a record. It will then print the athlete name and the event. It creates a list called relay_team, and each athlete is appended to the list after the details have been input. The for loop before the print statement takes the length of the list so it knows how many records to print. However only 3 athletes will be printed because it should be in range of 0, len rather than 1, len. self.name = None self.event = None