"You can't just copy-pase pseudocode into a program and expect it to work"



CSc 110 Scorekeeper saving and loading

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Score Keeper

- What if we wanted a program that we could use to keep track of player scoring during a sporting event
 - Each time points were scored, associated the player with the points scored
 - Be able to check how many points a player has scored



What are the challenges?

Score Keeper

```
Enter command: ADD Booker 3
Enter command: ADD James 2
Enter command: ADD Ayton 2
Enter command: ADD Booker 2
Enter command: ADD Booker 2
Enter command: GET Booker
Booker has 7 points.
Enter command: GET James
James has 2 points.
Enter command: GET Ayton
Ayton has 2 points.
Enter command: EXIT
(show scores)
```

```
def main():
                                                 players = []
                                                 points = []
def get command():
                                                while True:
    user input = input('Cmd: ')
                                                     command = get_command()
    return user_input.split(' ')
                                                     command_type = command[0]
                                                     if command type == 'ADD':
def get_index(players, points, player):
                                                         index = get_index(players, points, command[1])
    if player not in players:
                                                         points[index] += int(command[2])
        players.append(player)
                                                     elif command_type == 'GET':
        points.append(0)
                                                         index = get_index(players, points, command[1])
    return players.index(player)
                                                         print(command[1], 'has', points[index], 'points.')
                                                     elif command type == 'EXIT':
def show_scores(players, points):
                                                         return
    for i in range(len(players)):
                                                     else:
        print(players[i] + ': ' + points[i])
                                                         print('Huh?')
```

main()

Weaknesses

- Does not SAVE the game log info after the program ends
- What if something is entered incorrectly?
 - Is there a way to fix?

Weaknesses

- Does not SAVE the game log info after the program ends
- What if something is entered incorrectly?
 - o Is there a way to fix?

Can we use file I/O to resolve this?

```
def load_points_file(players, points):
    # implement!
def main():
    players = []
    points = []
    load_points_file(players, points)
    while True:
        command = get_command()
        command_type = command[0]
        # The code where we handle the command types
```

Activity

Implement load_points_file

```
def load_points_file(players, points):
```

This function should ask the user for the name of a file to load, then read the file and load the info into the players and points lists. You can assume the file will have one line per player. Each line will have the player name, and the points that player has scored. For example:

```
Booker 12
James 20
Jackson 7
```

. . .

Implement load_points_file

```
def load_points_file(players, points):
    file_name = input('Enter points file name: ')
    points_file = open(file_name, 'r')
```

Implement load_points_file

```
def load_points_file(players, points):
    file_name = input('Enter points file name: ')
    points_file = open(file_name, 'r')
    for line in points_file:
        line_split = line.split(' ')
        players.append( line_split[0] )
        points.append( line split[1] )
```

Implement load_points_file

```
def load_points_file(players, points):
    file_name = input('Enter points file name: ')
    points_file = open(file_name, 'r')
    for line in points_file:
        line_split = line.split(' ')
        players.append( line_split[0] )
        points.append( int(line_split[1]) )
```

```
def main():
def get command():
                                                     players = []
   user input = input('Cmd: ')
                                                     points = []
   return user input.split(' ')
                                                     load points file(players, points)
                                                     while True:
def get index(players, points, player):
   if player not in players:
                                                         command = get_command()
       players.append(player)
                                                         command_type = command[0]
       points.append(0)
                                                         if command_type == 'ADD':
   return players.index(player)
                                                              index = get_index(players, points, command[1])
def show scores(players, points):
                                                              points[index] += int(command[2])
   for i in range(len(players)):
                                                         elif command_type == 'GET':
       print(players[i] + ': ' + points[i])
                                                              index = get_index(players, points, command[1])
                                                              print(command[1], 'has', points[index], 'points.')
def load points file(players, points):
                                                         elif command type == 'EXIT':
   file name = input('Enter points file name: ')
   points file = open(file name, 'r')
                                                              return
   for line in points file:
                                                         else:
       line split = line.split(' ')
                                                              print('Huh?')
       players.append( line split[0] )
       points.append( int(line split[1]) )
                                                main()
```

Score Keeper

- What if we wanted a program that we could use to keep track of player scoring during a sporting event
 - Each time points were scored, associated the player with the points scored
 - Be able to check how many points a player has scored



What are the challenges?

```
def main():
def get command():
                                                     players = []
   user input = input('Cmd: ')
                                                     points = []
   return user input.split(' ')
                                                     load points file(players, points)
                                                     while True:
def get index(players, points, player):
   if player not in players:
                                                         command = get_command()
       players.append(player)
                                                         command_type = command[0]
       points.append(0)
                                                         if command_type == 'ADD':
   return players.index(player)
                                                              index = get_index(players, points, command[1])
def show scores(players, points):
                                                              points[index] += int(command[2])
   for i in range(len(players)):
                                                         elif command_type == 'GET':
       print(players[i] + ': ' + points[i])
                                                              index = get_index(players, points, command[1])
                                                              print(command[1], 'has', points[index], 'points.')
def load points file(players, points):
                                                         elif command type == 'EXIT':
   file name = input('Enter points file name: ')
   points file = open(file name, 'r')
                                                              return
   for line in points file:
                                                         else:
       line split = line.split(' ')
                                                              print('Huh?')
       players.append( line split[0] )
       points.append( int(line split[1]) )
                                                main()
```

```
def save points file(players, points):
    # implement!
def main():
    players = []
    points = []
    load_points_file(players, points)
    while True:
        command = get command()
        command type = command[0]
        elif command type == 'EXIT':
            save points file(players, points)
            break
        # . . .
```

Activity

```
def save points file(players, points):
    1.1.1
    This function should ask the user for the name of a file to save
    to, then save the points info to the file.
    It should write the output in the same format that the
    save points file function expects. For example:
    Booker 12
    James 20
    Jackson 7
    I = I
```

```
def save_points_file(players, points):
    # ?
```

```
def save_points_file(players, points):
    file_name = input('Enter points file name: ')
    points file = open(file name, 'w')
    points_file.close()
```

```
def save_points_file(players, points):
    file_name = input('Enter points file name: ')
    points_file = open(file_name, 'w')
    for i in range(len(players)):
        points_file.write(players[i] + ' ' + str(points[i]))
        points_file.write('\n')
    points file.close()
```

```
def get command():
                                               def main():
   user input = input('Cmd: ')
   return user input.split(' ')
                                                    players = []
                                                    points = []
def get index(players, points, player):
   if player not in players:
                                                    load points file(players, points)
      players.append(player)
                                                    while True:
      points.append(0)
   return players.index(player)
                                                          command = get command()
                                                          command type = command[0]
def show scores(players, points):
   for i in range(len(players)):
                                                          if command_type == 'ADD':
      print(players[i] + ': ' + str(points[i]))
                                                               index = get_index(players, points, command[1])
def load points file(players, points):
                                                               points[index] += int(command[2])
   file name = input('Enter points file name: ')
   points file = open(file name, 'r')
                                                          elif command type == 'GET':
   for line in points file:
                                                               index = get_index(players, points, command[1])
      line split = line.split(' ')
      players.append( line split[0] )
                                                               print(command[1], 'has', points[index], 'points.')
      points.append( int(line split[1]) )
                                                          elif command type == 'EXIT':
def save points file(players, points):
                                                               save points file(players, points)
   file name = input('Enter points file name: ')
                                                               show scores(players, points)
   points file = open(file name, 'w')
   for i in range(len(players)):
                                                               return
      points file.write(players[i] + ' ' + \
                                                          else:
                      str(points[i]))
                                                               print('Huh?')
      points file.write('\n')
   points file.close()
```