Lab 08
OOP – BSDS

Task 01: Create class Player. Player has data member:

- player name
- country
- carrier start year
- carrier end year
- number of matches
- number of innings
- number of times player remain not out
- total runs
- highest runs
- average runs
- hundreds
- fifties
- number of times player out on zero score

Create initializer function with 13 parameters. Assign value to each member. Write __str__ function to give string representation of player record in a single line using f-string. Use :15 with player name & country to align columns

Task 02: Write code in another file. Import your Player class. Take an empty list of players in main function. Write following function:

- to read data from file, create object of Player and append into the list. While passing data to your object, take care of data type
- write functions to find:
    a. player having longest span (subtract start from end to get span in years)
    b. player having best average
    c. player having highest not out
    d. player having lest zeros (minimum number of out on zero)

Task 03: Modify class Player. Add class level members count, total runs by all players, total hundreds by all players, countries (take an empty set and add country of every player in this set). Add required functionality in initializer function. Write getter for class level members. Next, use this modified class into another file and write following functions:

- print player names country wise, see output:

```
******* England *******

AN Cook JE Root GA Gooch AJ Stewart DI Gower KP Pietersen G Boycott MA
Atherton IR Bell MC Cowdrey WR Hammond AJ Strauss L Hutton KF
Barrington GP Thorpe ME Trescothick DCS Compton N Hussain MP Vaughan JM
Bairstow BA Stokes JB Hobbs IT Botham JH Edrich

******* Pakistan *******

Younis Khan Javed Miandad Inzamam-ul-Haq Mohammad Yousuf Azhar Ali
Saleem Malik Misbah-ul-Haq Zaheer Abbas

******* Australia *******

RT Ponting AR Border SR Waugh MJ Clarke ML Hayden SPD Smith ME Waugh DA
Warner JL Langer MA Taylor DC Boon GS Chappell DG Bradman MEK Hussey RN
Harvey AC Gilchrist KD Walters IM Chappell MJ Slater WM Lawry

******* Bangladesh *******

Mushfiqur Rahim Tamim Iqbal
```

- print count of player's country wise

```
India has 12 players
England has 24 players
Pakistan has 8 players
Australia has 20 players
Bangladesh has 2 players
Newzealand has 6 players
West Indies has 12 players
South Africa has 7 players
Sri Lanka has 10 players
```

- print total runs by each country

```
Bangladesh has 10317 total runs
South Africa has 59572 total runs
Newzealand has 39454 total runs
England has 172525 total runs
West Indies has 93946 total runs
Australia has 152705 total runs
Pakistan has 58373 total runs
Sri Lanka has 72085 total runs
India has 103187 total runs
```