Practice Projects: Python Programming

Question 1: Codecademy Project on Python Programming

Skill Mapping - Beginner

Description - Solve the Codecademy quiz as well as complete the project given as a link below, and share the screen-shot of its completion as a Mini-Project assignment

- https://www.codecademy.com/courses/learn-python/projects/dna

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Question 2: Console based game - The Home Run

Skill Mapping - Expert

Description - Create a console based game in Python called "The Home Run". Here are the specifies -

- The board game is played by two players.
- Each player rolls a dice one after the other, and moves their game piece along the board according to the number rolled on the dice.
- The objective of the game is to reach the finish line on step 30 before the other player.
- If a player lands on a step where the other player is already standing, the latter player must move back to the start of the board and begin again. Also grants the Current player an additional move.
- Rolling a 6 on the dice grants the Current player an additional move.
- The game continues until one player reaches the finish line and wins the game.

Sample Output -

```
Press 'Y' to roll dice for Player: A - y
Dice rolled: 4
Player A: 4 | Player B: 0

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 01 | 02 | 03 |  A | 05 |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
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 21 | 22 | 23 | 24 | 25 |
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 30 | 29 | 28 | 27 | 26 |
-------------------------
```

```
Press 'Y' to roll dice for Player: B - y
Dice rolled: 5
Player A: 4 | Player B: 5


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 01 | 02 | 03 |  A |  B |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
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Press 'Y' to roll dice for Player: A - y
Dice rolled: 4
Player A: 8 | Player B: 5


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 01 | 02 | 03 | 04 |  B |
-------------------------
 10 | 09 |  A | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
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Press 'Y' to roll dice for Player: B - y
Dice rolled: 4
Player A: 8 | Player B: 9


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 01 | 02 | 03 | 04 | 05 |
-------------------------
 10 |  B |  A | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------
```

```
Press 'Y' to roll dice for Player: A - y
Dice rolled: 6
Player A: 14 | Player B: 9

-------------------------
 01 | 02 | 03 | 04 | 05 |
-------------------------
 10 |  B | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 |  A | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: A - y
Dice rolled: 1
Player A: 15 | Player B: 9

-------------------------
 01 | 02 | 03 | 04 | 05 |
-------------------------
 10 |  B | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 |  A |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: B - y
Dice rolled: 6
Player A: 0 | Player B: 15

-------------------------
 01 | 02 | 03 | 04 | 05 |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 |  B |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: B - y
```

```
Dice rolled: 4
Player A: 0 | Player B: 19

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 01 | 02 | 03 | 04 | 05 |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 |  B | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: A - y
Dice rolled: 5
Player A: 5 | Player B: 19

-------------------------
 01 | 02 | 03 | 04 |  A |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 |  B | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: B - y
Dice rolled: 5
Player A: 5 | Player B: 24

-------------------------
 01 | 02 | 03 | 04 |  A |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 |  B | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: A - y
Dice rolled: 5
```

```
Player A: 10 | Player B: 24

-------------------------
 01 | 02 | 03 | 04 | 05 |
-------------------------
  A | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 |  B | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: B - y
Dice rolled: 5
Player A: 10 | Player B: 29

-------------------------
 01 | 02 | 03 | 04 | 05 |
-------------------------
  A | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 | 13 | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 |  B | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: A - y
Dice rolled: 3
Player A: 13 | Player B: 29

-------------------------
 01 | 02 | 03 | 04 | 05 |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 |  A | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 |  B | 28 | 27 | 26 |
-------------------------

Press 'Y' to roll dice for Player: B - y
Dice rolled: 5
Player A: 13 | Player B: 34
```

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 01 | 02 | 03 | 04 | 05 |
-------------------------
 10 | 09 | 08 | 07 | 06 |
-------------------------
 11 | 12 |  A | 14 | 15 |
-------------------------
 20 | 19 | 18 | 17 | 16 |
-------------------------
 21 | 22 | 23 | 24 | 25 |
-------------------------
 30 | 29 | 28 | 27 | 26 |
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Welcome Home!!
Winner is Player: B
```