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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » The Joy of Computing using Python (course)



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Course
outline

About NPTEL
()

How does an
NPTEL online
course work?
()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

week 4 ()

Week 5 ()

☐ Introduction to
Dictionaries
(unit?
unit=104&lesso
n=105)

☐ Speech to Text :
No need to

Week 5: Assignment 5

Your last recorded submission was on 2024-08-18, 00:31 IST Due date: 2024-08-28, 23:59 IST.

1) Which of the following is the correct way to add data with key as **CS101** and value as **Web Programming** to a dictionary named **courseData**? **1 point**

- ☐ `courseData["CS101"].append("Web Programming")`
- ☐ `courseData["CS101"]["Web Programming"]`
- ☐ `courseData["CS101"] = "Web Programming";`
- ☒ `courseData["CS101"] = "Web Programming"`

2) What is the probability of Monty opening the door with goat, given the hypothesis that you initially chose the door which has car ? **1 point**

- ☐ 0.5
- ☒ 0.66
- ☐ 0.33
- ☐ 1

3) What should be replaced with ? in line 10, so that there is high chance that **final_choice** is equal to 2 ? **1 point**

write 01 (unit?
unit=104&lesso
n=106)

Speech to Text :
No need to
write 02 (unit?
unit=104&lesso
n=107)

Speech to Text :
No need to
write 03 (unit?
unit=104&lesso
n=108)

Monte Hall : 3
doors and a
twist 01 (unit?
unit=104&lesso
n=109)

Monte Hall : 3
doors and a
twist 02 (unit?
unit=104&lesso
n=110)

Rock, Paper
and Scissor :
Cheating not
allowed !! 01
(unit?
unit=104&lesso
n=111)

Rock, Paper
and Scissor :
Cheating not
allowed !! 02
(unit?
unit=104&lesso
n=112)

Rock, Paper
and Scissor :
Cheating not
allowed !! 03
(unit?
unit=104&lesso
n=113)

Rock, Paper
and Scissor :
Cheating not
allowed !! 04
(unit?
unit=104&lesso
n=114)

Sorting and
Searching : 20
questions game
01 (unit?
unit=104&lesso
n=115)

Sorting and
Searching : 20

```
1 import random
2 initial_choice = random.randint(0, 2)
3 doors = ['goat', 'goat', 'car']
4
5 for i in range(3):
6     if i != initial_choice and doors[i] != 'car':
7         monty_opens = i
8         break
9
10 if True:
11     for i in range(3):
12         if i != initial_choice and i != monty_opens:
13             final_choice = i
14             break
15 else:
16     final_choice = initial_choice
```

- ☒ True
- ☒ $(2^{*}90) \% 2 == 0$
- ☒ $3*((3^{*}89) + 3) \% 3 == 0$
- ☒ $(2^{*}90) \% \text{len}(\text{doors}) == 1$

4) Given that you have a sorted list of 1024 elements, what is the maximum number of comparisons required to find the target element using binary search ? Also what is the number of comparisons to search such an element using linear search ? **1 point**

- ☐ Binary: 10, Linear: 512
- ☐ Binary: 11, Linear: 1024
- ☒ Binary: 10, Linear: 1024
- ☐ Binary: 11, Linear: 512

5) What type of data is contained in a file with a .wav or .wave extension? **1 point**

- ☐ Log data
- ☒ Audio data
- ☐ Video data
- ☐ Image data

6) What does this program print in the end ? **1 point**

```
import random
n=10
counter = 0
for i in range(n):
    choices = ["rock", "paper", "scissors"]
    choice1 = random.choice(choices)
    choice2 = random.choice(choices)
    if choice1 == choice2:
        counter += 1
print(counter/n)
```

questions game
02 (unit?
unit=104&lesso
n=116)

○ Sorting and
Searching : 20
questions game
03 (unit?
unit=104&lesso
n=117)

○ Sorting and
Searching : 20
questions game
04 (unit?
unit=104&lesso
n=118)

○ Sorting and
Searching : 20
questions game
05 (unit?
unit=104&lesso
n=119)

○ Sorting and
Searching : 20
questions game
06 (unit?
unit=104&lesso
n=120)

○ Sorting and
Searching : 20
questions game
07 (unit?
unit=104&lesso
n=121)

○ Sorting and
Searching : 20
questions game
08 (unit?
unit=104&lesso
n=122)

● Quiz: Week 5:
Assignment 5
(assessment?
name=462)

● Week 5:
Programming
Assignment 1
(/noc24_cs113/
progassignment
?name=464)

● Week 5:
Programming
Assignment 2
(/noc24_cs113/
progassignment
?name=465)

● Week 5:
Programming
Assignment 3

- ☐ Fraction of throws where both players showed different symbol(rock/paper/scissors)
- ☐ Fraction of throws where both players showed rock.
- ☒ Fraction of throws where both players showed same symbol(rock/paper/scissors)
- ☐ Fraction of throws where both players showed paper.

7) In binary search, what happens if the target value is greater than the middle element of the array? **1 point**

- ☐ The search continues in the left half of the array.
- ☒ The search continues in the right half of the array.
- ☐ The search ends.
- ☐ The array is sorted again.

8) Which of the following is a requirement for binary search to work correctly? **1 point**

- ☒ The list must be sorted.
- ☐ The list must contain only positive numbers.
- ☐ The list must be of an even length.
- ☐ The list must contain unique elements.

9) Given an array [5, 3, 8, 4, 2], what will be the array after the third pass of Bubble Sort? **1 point**

- ☐ [3, 2, 4, 8, 5]
- ☒ [3, 2, 4, 5, 8]
- ☐ [2, 3, 4, 5, 8]
- ☐ [3, 5, 2, 4, 8]

10) How many swaps are performed in iteration 3 for bubble sorting list [4,3,2,1]? Enter 0 if the list is sorted in less than 3 iterations.

1 point

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers

(/noc24_cs113/
progassignment
?name=466)

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Session - July
2024 ()**