Metropolitan State University, Saint Paul, Minnesota

ICS 140 Computational Thinking with Programming

Assignment 10

**Multiple Choice Test**

Write a program that performs a multiple-choice test. The test will have 10 questions. The program should prompt the user to enter an answer for each question and store the provided answers in a list. It should compare this list to a list of correct answers. The program should include 3 functions called collect\_student\_answers, check\_answers, and the main function.

The collect\_student\_answers function should have the following qualities:

* It should receive no arguments.
* It should use a count-controlled loop to prompt the user for 10 answers and store each answer in a list.
* It should return the list of the student’s answers.

The check\_answers function should have the following qualities:

* It should receive a list of answers as an argument
* It should check the provided list against a list of correct answers.
* It should use an accumulator to update the score as it processes the lists
* It should return the score

The main function should do the following:

* Print instructions to the user
* Call the collect\_student\_answers function to gather their answers.
* Call the check\_answers function and pass in the list of answers provided and get the score.
* Print the score.

You can use the following list of correct answers, or you can make your own.

CORRECT\_ANSWERS = ["A", "C","D","B","B","D","B","A","C","A"]

It should look something like this when run:

Text

Description automatically generated

Or this:

Text

Description automatically generated

Paste the python code below in the Python code section.

**Assignment 10 Python Code**

def main():

print("This program will collect your answers for a multiple choice test. All answers will be A - D.")

student\_answers = collect\_student\_answers()

score = check\_answers(student\_answers)

print(score)

def collect\_student\_answers():

student\_answers = []

valid\_answers = ["A","B","C","D"]

*for* i *in* range(10):

answer = input(f"What is your answer for question #{i+1}?").upper()

*while* answer *not* *in* valid\_answers:

answer = input(f"Invalid Input. What is your answer for question #{i+1}?").upper()

student\_answers.append(answer)

print(f"Your answers where : {student\_answers}")

*return* student\_answers

def check\_answers(*answer*):

answer\_key = ["A", "C","D","B","B","D","B","A","C","A"]

print(f"The correct answers are : {answer\_key}")

number\_correct = 0

*for* i *in* range(len(*answer*)):

*if* *answer*[i] == answer\_key[i]:

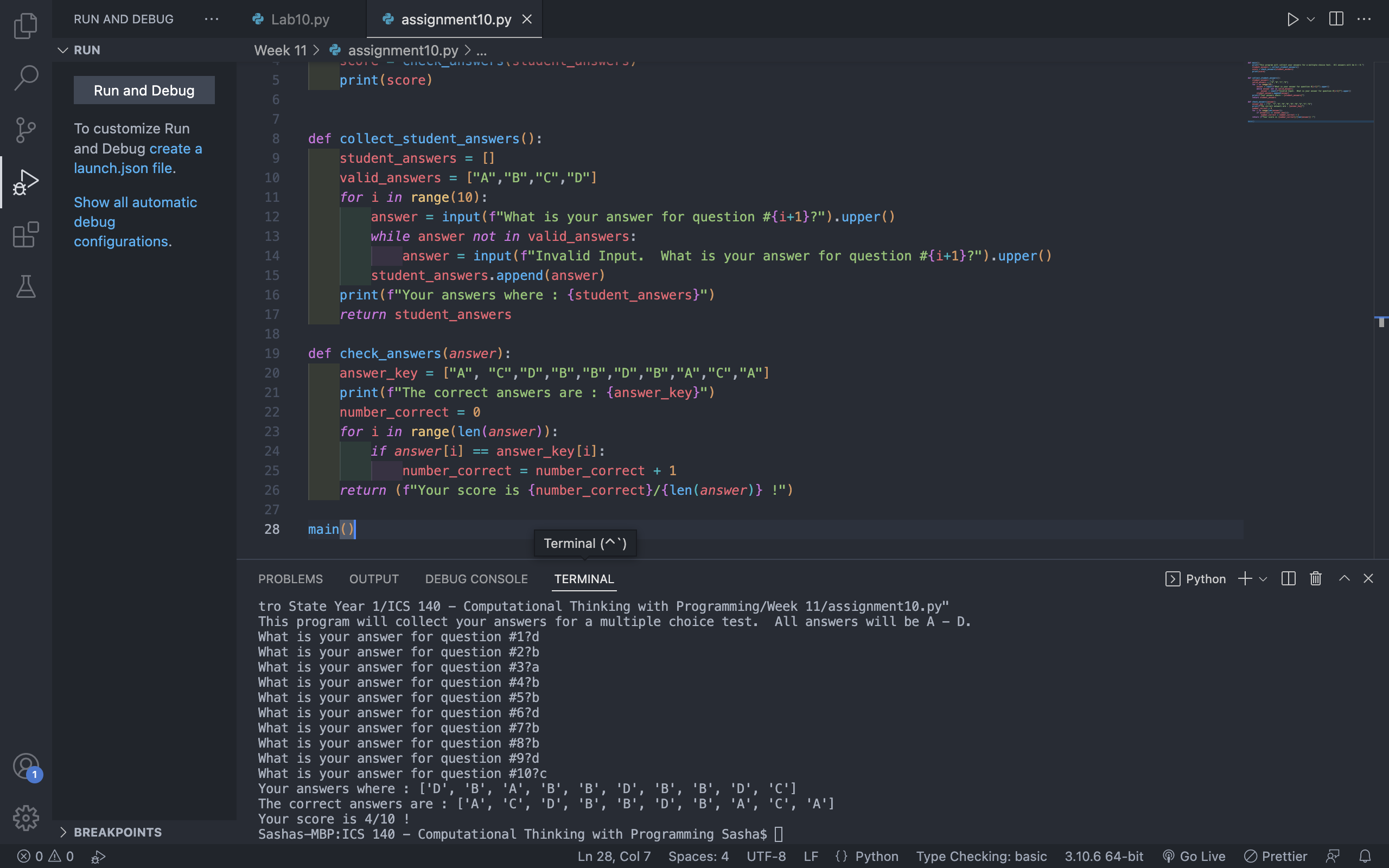
number\_correct = number\_correct + 1

*return* (f"Your score is {number\_correct}/{len(*answer*)} !")

main()

Paste the screenshot of the program

**Screenshot of Program Output**

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