EE6310

Problem Set 1

1. Indicate the type of variables:
2. age = 18
3. name = "Alice"
4. temperature = 25.5
5. is\_student = True
6. siblings = 2
7. course = 'Mathematics'
8. height = 5.9
9. has\_pet = False
10. score = 87
11. grade = '''A'''
12. Indicate which type conversion would result in error. Be ready to explain.
13. num = 10

num\_str = str(num)

1. num\_str = "20"

num = int(num\_str)

1. float\_num = 3.14

int\_num = int(float\_num)

1. int\_num = 5

float\_num = float(int\_num)

1. num\_str = "3.14"

float\_num = float(num\_str)

1. num\_str = "abc"

num = int(num\_str)

1. float\_num = 3.14

num\_str = str(float\_num)

1. bool\_str = "True"

bool\_val = bool(bool\_str)

1. num = 0

bool\_val = bool(num)

1. bool\_val = True

num = int(bool\_val)

1. Indicate whether the following string declaration would result in error. Be ready to explain.
2. "blue"
3. "Hello, how are you?'
4. 'John Smith'
5. "You got the "First Place""
6. 'I'm Invalid String'
7. "It's sunny today."
8. 'This is a "string"'
9. "https://www.example.com"
10. '''Good evening'''
11. Given the string line, use the squared bracket code to print string described in each problem.
12. line = "Python Programming"

print the first character.

1. line = "Data Science is fun"

print the substring "Science".

1. line = "Hello, World!"

print the last character.

1. line = "Artificial Intelligence"

print the substring "Intelligence"

1. line = "AI is amazing!"

print the substring "amazing".

1. Given the code, indicate what the output will be:
2. word = "Python"

print(word[2])

1. sentence = "Data Science"

print(sentence[5])

1. phrase = "Hello, World!"

print(phrase[-1])

1. text = "Machine Learning"

print(text[:7])

1. line = "Artificial Intelligence"

print(line[2:10])

1. Write a formatted string that prints the string given the variable declaration.
2. name = "Alice"

age = 25

output:

My name is Alice and I am 25 years old.

1. day = "Monday"

month = "February"

date = 25

year = 2024

output:

Today is Monday, February 25, 2024.

1. price = 19.99

output:

The price of the item is $19.99.

1. temperature = 25.5

output:

The temperature is 25.5 degree C.