Ghulam Shabbir
7 D
AI
Lab task 1

Code:

```
# a. Create a variable name and assign your name to it.
name = "John"
print(name)
```

```
# b. Create variables num1 and num2, assign them integer values,
calculate and print their sum.
num1 = 10
num2 = 20
sum_of_nums = num1 + num2
print("Sum:", sum_of_nums)
```

```
John
Sum: 30
```

```
# a. Create a string variable sentence with the value "Hello, World!".
sentence = "Hello, World!"
```

```
# b. Print the length of the string.
print("Length of the string:", len(sentence))
```

```
# c. Print the first three characters of the string.
print("First three characters:", sentence[:3])
```

```
# a. Create a list fruits with three fruit names.
fruits = ["apple", "banana", "cherry"]
```

```
# b. Add a new fruit to the list.
fruits.append("orange")
```

```
# c. Print the second item in the list.
print("Second fruit:", fruits[1])
```

```
Length of the string: 13
First three characters: Hel
Second fruit: banana
```

```
# a. Write a program that takes a number as input and prints whether
it's positive, negative, or zero.
num = int(input("Enter a number: "))
if num > 0:
    print("Positive number")
elif num < 0:
    print("Negative number")
else:
    print("Zero")
```

```python
# b. Write a program to check if a number is even or odd.
num = int(input("Enter a number: "))
if num % 2 == 0:
    print("Even number")
else:
    print("Odd number")
```

```
Enter a number: 5
Positive number
```

```python
# a. Use a loop to print numbers from 1 to 5.
for i in range(1, 6):
    print(i)
```

```python
# b. Use a loop to iterate through a list of colors and print each
color.
colors = ["red", "blue", "green", "yellow"]
for color in colors:
    print(color)
```

```python
# a. Write a function square that takes a number as input and returns
its square.
def square(num):
    return num ** 2
```

```python
print("Square of 4:", square(4))
```

```python
# b. Write a function greet that takes a name as input and prints a
greeting.
def greet(name):
    print(f"Hello, {name}!")
```

```python
greet("Alice")
```

```python
# a. Create a dictionary student with keys 'name' and 'age'.
student = {
    'name': 'John',
    'age': 20
}
```

```
Enter a number: 3
Odd number
1
2
3
4
5
red
blue
green
yellow
Square of 4: 16
Hello, Alice!
```

```python
# b. Add a new key-value pair to the dictionary.
student['grade'] = 'A'
```

```python
# c. Print the value associated with the 'age' key.
print("Student's age:", student['age'])
```

a. Create a text file and write a few lines of text to it using Python.

```python
import math
num = 16
print("Square root:", math.sqrt(num))

def my_function():
    return "Hello from my module!"
```

```python
from my_medule import my_function
print(my_function())
```

Output

```
Square of 4: 16
Hello, Alice!
Student's age: 20
Square root: 4.0
```

```
[Running] python -u "h:\Python\Lab_task.py"
Hello, this is the first line.
And this is the second line.
```

```
Square root: 4.0
Hello from my module!
```