Web Development Using Python Framework (230701106)

Python Practical Exam Paper Set 1 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the sum of all odd numbers between 1 and 100.
2. Write a python program to create a function that checks if a given number is prime. Hint: A prime number is a whole number greater than 1 whose only factors are 1 and itself.
3. Write a python program to use the finally block to execute code regardless of whether an exception is raised or not.
4. Write a python program to create a base class **Animal** with a method **speak()**. Create a derived class Dog that inherits from Animal and overrides the **speak()** method.
5. Write a python program to create multiline string and do the following operation:
   a. Using the slicing method, display string from the 3rd line.
   b. Remove whitespace from starting of the string and display the output.
   c. Convert string into list of words and display the output.
   d. Check if "student" word present in the string and display the output.
   e. Create another string variable with 3 placeholders '{var}' and using f string methods replace the placeholders.

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Python Practical Exam Paper Set 2 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the sum of all numbers from 1 to 100 that are divisible by 3 or 5.
2. Write a python program to create a function that counts the number of vowels in a given string.
3. Write a python program to handle multiple exceptions (**ZeroDivisionError** and **FileNotFoundError**) in the same try-except block.
4. Write a python program to define a class called **Product** with attributes **name**, **price**, and **quantity**. Implement a method to calculate and display the total cost of a product.
5. Write a python program to create a list of 10 elements containing various data types and do the following operations:
    a. Using the range of indexes method, display the list starting from 2nd position to 7th position.
    b. Remove the 5th position item and insert new item at position 9th position and display the output.
    c. Create new list with 3 elements and append this list to last one and display the output.
    d. Create new list of cars and using the list comprehension method, display the new list of cars names with contain character 'n' in it.

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Python Practical Exam Paper Set 3 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the sum of all numbers from 1 to 100 that are prime. Hint: A prime number is a whole number greater than 1 whose only factors are 1 and itself.
2. Write a python program to create a function that reverses a given string.
3. Write a python program to handle the **FileNotFoundError** exception when trying to open a non-existent file.
4. Write a python program to create a class **Calculator** with methods to **add**, **subtract**, **multiply**, and **divide** two numbers.
5. Write a python program to create a tuple of 6 elements containing various data types and do the following operations:
    a. Using the range of indexes method, display the tuple starting from 4h position.
    b. Remove the item from 3rd position and display the output.
    c. Create 4 variables and assign values from tuple. Display the variables values.
    d. Create new tuple with 3 elements and join it. Display the joined tuple.
    e. Multiply each element by 3 and create a new tuple.

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Python Practical Exam Paper Set 4 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the product of all numbers from 1 to 20 that are divisible by 4.
2. Write a python program to create a function that checks if a given number is a palindrome. Hint: A palindromic number is a number that remains the same when its digits are reversed
3. Write a python program to raise a **ValueError** exception with a custom message.
4. Write a python program to define a class called **Car** with attributes **make**, **model**, **year**, and **color**. Implement a method to display the car's details.
5. Write a python program to create a dictionary of 6 key-value pairs and do the following operations:
   a. Display the items from it.
   b. Update the key 'model' and remove last pair. Display the output.
   c. Copy the dictionary into new variable and clear the previous dictionary variable. Display the output.
   d. Create nested dictionary with name 'preson_info' and display the name and age.

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Python Practical Exam Paper Set 5 (50 Marks)

Duration: 1 hour

Instructions: Answer all questions. Each question is worth 10 marks. Also use appropriate comments in the programs.

1. Write a python program to find the sum of all numbers from 1 to 100 that are not divisible by 2, 3, or 5.
2. Write a python program to create a function that finds the second largest element in a list of numbers.
3. Write a python program to handle multiple exceptions (**ZeroDivisionError** and **FileNotFoundError**) in the same try-except block.
4. Write a python program to define a Python class called **Person** with attributes **name** and **age**. Implement a method to display the person's details.
5. Write a python program to generates a multiplication table from 6 to 10 using nested loops