●Coding Problem 1:-

Write a program that takes a user's name and age as input and prints a Hello World! message that includes their name and age.

```
name = str(input("What is your Name ? "))
age = int(input("What is your age ? "))

print("Hello World!")
print(name)
print(age)
```

Create a program that swaps the values of two variables without using a third variable.

```
num1 = int(input("Enter 1st Number : "))
num2 = int(input("Enter 2nd Number : "))
num1 = num1 + num2
num2 = num1 - num2
num1 = num1 - num2
print("Swapped numbers are" num1 "and" num2)
```

●Coding Problem 2:-

Create a program that prints the first 10 numbers of the Fibonacci sequence.

```
n1, n2 = 0, 1
count = 0

print("Fibonacci sequence:")
while count < 10:
  print(n1)
  nth = n1 + n2
  n1 = n2
  n2 = nth
  count += 1
```

●Coding Problem 3:-

Create a function that checks if a given string is a palindrome.

```
def isPalindrome(s):
   return s == s[::-1]

s = input(str("Enter a Word: "))
```

```
ans = isPalindrome(s)

if ans:
    print("Yes")
else:
    print("No")
```

Create a program that removes duplicate elements from a list.

```
def remove_duplicates(input_list):
    unique_list = []
    for item in input_list:
        if item not in unique_list:
            unique_list.append(item)
    return unique_list

input_list = input("Enter elements of the list separated by spaces: ").split()

input_list = [int(x) for x in input_list]

print("Original list:", input_list)
print("List with duplicates removed:", remove_duplicates(input_list))
```

Write a class representing a simple bank account with methods to deposit, withdraw, and check balance.

```
class BankAccount:
    def __init__(self, balance=0):
        self.balance = balance

    def deposit(self, amount):
        if amount > 0:
            self.balance += amount
            print(f"Deposited {amount}. New balance: {self.balance}")
        else:
            print("Deposit amount must be greater than zero.")

    def withdraw(self, amount):
        if 0 < amount <= self.balance:
            self.balance -= amount
            print(f"Withdrew {amount}. New balance: {self.balance}")
        else:
            print("Withdrawal amount exceeds balance.")
```

```
    def check_balance(self):
        print(f"Current balance: {self.balance}")

# Example usage:
account = BankAccount()
account.deposit(1000)
account.check_balance()
account.withdraw(500)
account.check_balance()
account.withdraw(700)
```

●Coding Problem 4

#Write a program that creates a 3x3 matrix with values ranging from 1 to 9. Then, modify the matrix by doubling the values of the second row.

```
matrix = [[1, 2, 3],
          [4, 5, 6],
          [7, 8, 9]]

for i in range(len(matrix[1])):
    matrix[1][i] *= 2

for row in matrix:
    print(row)
```