ASSIGNMENT – 2

1. Write a Python for loop that prints the numbers from 1 to 10.

```
for i in range(1,11):
    print(i)
```

Output:

```
1
2
3
4
5
6
7
8
9
10
```

2. Create a list of fruits (e.g., ["apple", "banana", "cherry"]) and write a for loop to print each fruit in the list.

```
fruits=['apple','banana','cherry']
for i in fruits:
    print(i)
```

Output:

```
apple
banana
cherry
```

3. Write a Python program that calculates the sum of all even numbers from 1 to 50 using a for loop.

```
sum=0
for i in range(1,50):
   if(i%2==0):
     sum=sum+i
print(sum)
```

output:

600

4. Create a list of integers, and using a for loop, find and print the largest number in the list.

```
max=0
list=[1,23,11,6,43,25]
for i in list:
   if i>max:
      max=i
print(max)
```

output:

43

5. Write a Python program that uses a for loop to find and print all the prime numbers between 1 and 100. A prime number is a positive integer greater than 1 that has no positive integer divisors other than 1 and itself.

```
for i in range(1,100):
    for j in range(2,i):
        if i%j==0:
            break
    else:
        print(i,end=' ')
```

output:

```
1 2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97
```

6. Write a Python program that takes a list of dictionaries, where each dictionary represents a person with keys "name" and "age." Find and print the average age of all the people in the list.

```
def average_age(people):
    total_age = 0
    count = 0
    for person in people:
        total_age =total_age+ person["age"]
        count =count+1
    if count == 0:
        return "No people in the list"
```

```
    else:
        return total_age / count
people = [
    {"name": "arun", "age": 25},
    {"name": "kumar", "age": 30},
    {"name": "bright", "age": 22},
]
print(average_age(people))
```

output:

```
25.666666666666668
```

7. Create a dictionary representing a simple inventory system for a store. Implement a function that allows you to update the quantity of items in the inventory by specifying the item name and the new quantity.

```
inventory = {
    "apple": 50,
    "banana": 30,
    "orange": 20,
    "grape": 100,
    "strawberry": 50,
}

def update_inventory(item_name, new_quantity):
    if item_name in inventory:
```

```
        inventory[item_name] = new_quantity
    else:
        print(f"Error: Item '{item_name}' not found in the inventory.")

update_inventory("apple", 60)
update_inventory("cherry", 70)
print(inventory)
```

output:

```
Error: Item 'cherry' not found in the inventory.
{'apple': 60, 'banana': 30, 'orange': 20, 'grape': 100, 'strawberry': 50}
```