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Lab Task: 4

Subject: Software Construction and Development

Department: BSSE

Semester: 5th

Date: 4 December 2025

Code:

1. Squares of numbers 1 to 10

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

```
    print(i * i)
```

2. Count vowels in a string

```
name = input("Enter string: ")
```

```
vowels = "aeiouAEIOU"
```

```
count = 0
```

```
for i in name:
```

```
    if i in vowels:
```

```
        count += 1
```

```
print("Vowels:", count)
```

3. Print marks greater than 50

```
list1 = [40, 60, 15, 85]
```

```
for i in list1:
```

```
    if i > 50:
```

```
        print(i)
```

4. Multiplication table

```
value = int(input("Enter a number: "))
```

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

```
    print(value, "x", i, "=", i * value)
```

5. Odd numbers between 1 and 20

```
i = 1
```

```
while i < 20:
```

```
    if i % 2 != 0:
```

```
        print(i)
```

```
    i += 1
```

6. Password check loop

```
correct = "password1"
```

```
while True:
```

```
    passw = input("Enter password: ")
```

```
    if passw == correct:
```

```
        print("Welcome")
```

```
        break
```

```
    else:
```

```
        print("Incorrect Password")
```

7. Keep input until "stop"

```
correct = "stop"
```

```
while True:
```

```
    ok = input("Enter number: ")
```

```
    if ok == correct:
```

```
        print("Stopped")
```

```
        break
    else:
        print("Enter again:")
```

```
# 8. Sum of numbers 1 to n
n = int(input("Number: "))
result = n * (n + 1) / 2
print("Sum:", result)
```

```
# 9. Largest number in list
list1 = [1, 2, 3, 4, 5, 6, 7]
largest = list1[0]
for i in list1:
    if i > largest:
        largest = i
print("Largest:", largest)
```

```
# 10. Print all elements of list
list1 = [1,2,3,4,5,6,7,8,9,10]
for i in list1:
    print(i)
```

```
# 11. Average until negative input
result = 0
```

```
count = 0
while True:
    num = int(input("Enter a number: "))
    if num < 0:
        break
    result += num
    count += 1
if count > 0:
    print("Average:", result / count)
else:
    print("Invalid")
```

12. Palindrome check

```
num = int(input("Enter a number: "))
original = num
reverse = 0
while num > 0:
    digit = num % 10
    reverse = reverse * 10 + digit
    num = num // 10
if original == reverse:
    print("Palindrome")
else:
    print("Not Palindrome")
```

Output:

```
PS C:\Users\Ozair Khan\Desktop\github> & "C:/Users/Ozair Khan/A  
Users/Ozair Khan/Desktop/github/b.py"  
1  
4  
9  
16  
25  
36  
49  
64  
81  
100  
Enter string: 68  
Vowels: 0  
60  
85  
Enter a number: 5  
5 x 1 = 5  
5 x 2 = 10  
5 x 3 = 15  
5 x 4 = 20  
5 x 5 = 25  
5 x 6 = 30  
5 x 7 = 35  
5 x 8 = 40  
5 x 9 = 45  
5 x 10 = 50  
36  
49  
64  
81  
100  
Enter string: 68  
Vowels: 0  
60  
85
```

```
Enter a number: 5
```

```
5 x 1 = 5
```

```
5 x 2 = 10
```

```
5 x 3 = 15
```

```
5 x 4 = 20
```

```
5 x 5 = 25
```

```
5 x 6 = 30
```

```
5 x 7 = 35
```

```
5 x 8 = 40
```

```
5 x 9 = 45
```

```
5 x 10 = 50
```

```
Enter password: 7688
```

```
Incorrect Password
```

```
Enter password: 1234
```

```
Incorrect Password
```

```
Enter password: 4321
```

```
PS C:\Users\Ozair Khan\Desktop\github> .\b.py  
Users/Ozair Khan/Desktop/github
```

```
Enter number: 6
```

```
Enter again:
```

```
Enter number: 7
```

```
Enter again:
```

```
Enter number: 2
```

```
Enter again:
```

```
Enter number: 1
```

```
Enter again:
```

```
Enter number: 8
```

```
Enter again:
```

```
Enter number: █
```

```
PS C:\Users\Ozair Khan\Desktop\github> & "c:/Users/Ozair Khan/Desktop/github/b.py"  
Number: 6  
Sum: 21.0  
Largest: 7  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```