Rhea Adhikari
190905156
DS Lab2
Roll No 23

1)
```python
l = int(input('Enter length '))
b = int(input('Enter breadth '))
area = l * b
print('Area of rectangle is ', area)
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex1.py"
Enter length 5
Enter breadth 6
('Area of rectangle is ', 30)
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$
```

2)
```python
# swap 2 variables
x = 10
y = 20
print("Before swap x=", x, "y=", y)
t = x
x = y
y = t
print("After swap x=", x, "y=", y)
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex2.py"
('Before swap x=', 10, 'y=', 20)
('After swap x=', 20, 'y=', 10)
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$
```

3)
```python
# check if number even or odd
num = 23
if num % 2 == 0:
    print("even")
else:
    print("odd")
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex3.py"
odd
```

4)
```python
# largest among 3 numbers
x = 10
y = 20
z = 14
if((y > x) & (y > z)):
```

```
    print("y is the largest")
elif ((x > y) & (x > z)):
    print("x is the largest")
else:
    print("z is the largest")
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex4.py"
y is the largest
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ []
                                                                    Ln 6, Col 27    Spaces: 4    @ Go Live    ⊘ Prettier    ⌂
```

5)
```
# while loop with else
x = 10
while(x > 0):
    if(x % 2 == 0):
        print(x)
    else:
        print("odd")
    x -= 1
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex5.py"
10
odd
8
odd
6
odd
4
odd
2
odd
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ []
                                                                    Ln 7, Col 21    Spaces: 4    @ Go Live    ⊘ Prettier    ⌂
```

6)
```
fruits = ["apple", "banana", "cherry", "kiwi", "mango"]
newlist = []

for x in fruits:
    if "a" in x:
        newlist.append(x)

print(newlist)
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex6.py"
['apple', 'banana', 'mango']
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ []
                                                                    Ln 8, Col 15    Spaces: 4    @ Go Live    ⊘ Prettier    ⌂
```

7)

```python
mytuple = (1, 3, 5, 7, 9, 2, 4, 6, 8, 10)
l = len(mytuple)
cnt = 0
for x in mytuple:
    if(cnt < l/2):
        print(x)
    else:
        print('')
        cnt = 0
    print(" ")
    cnt += 1
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex7.py"
1

3

5

7

9


4

6

8

10
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ []
                                              Ln 10, Col 14   Spaces: 4   Go Live   Prettier
```

8)
```python
tup = (12, 7, 38, 56, 78)
eventup = ()
for x in tup:
    if(x % 2 == 0):
        eventup = eventup + (x,)
print(eventup)
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex8.py"
(12, 38, 56, 78)
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ []
                                              Ln 2, Col 13   Spaces: 4   Go Live   Prettier
```

9)

```python
li = [11, -21, 0, 45, 66, -93]
for x in li:
```

```
    if(x < 0):
        print(x)
```

10)

```
li = [11, -21, 0, 45, 66, -93]
i = 0
while(i < len(li)):
    if(li[i] < 0):
        print(li[i])
    i += 1
```

11)

```
li = [11, -21, 0, 45, 66, -93]
i = 0
while(i < len(li)):
    print(li[i])
    if(li[i] == 0):
        print("zero")
    elif(li[i] < 0):
        print("negative")
    else:
        print("positive")
    i += 1
```

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex11.py"
11
positive
-21
negative
0
zero
45
positive
66
positive
-93
negative
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ []
                                              Ln 4, Col 17    Spaces: 4    Go Live    Prettier    ⌂
```

12)
li = [12, 7, 39, 56, 78]
odd = []
for x in li:
    if(x % 2 != 0):
        odd.append(x)
print(odd)

```
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ python -u "/home/rhea/data/190905156_DS/Lab2/exercises in d
oc to do/ex12.py"
[7, 39]
rhea@rhea-Lenovo-IdeaPad-S145-15IWL:~/data/190905156_DS$ []
                                              Ln 7, Col 1    Spaces: 4    Go Live    Prettier    ⌂
```