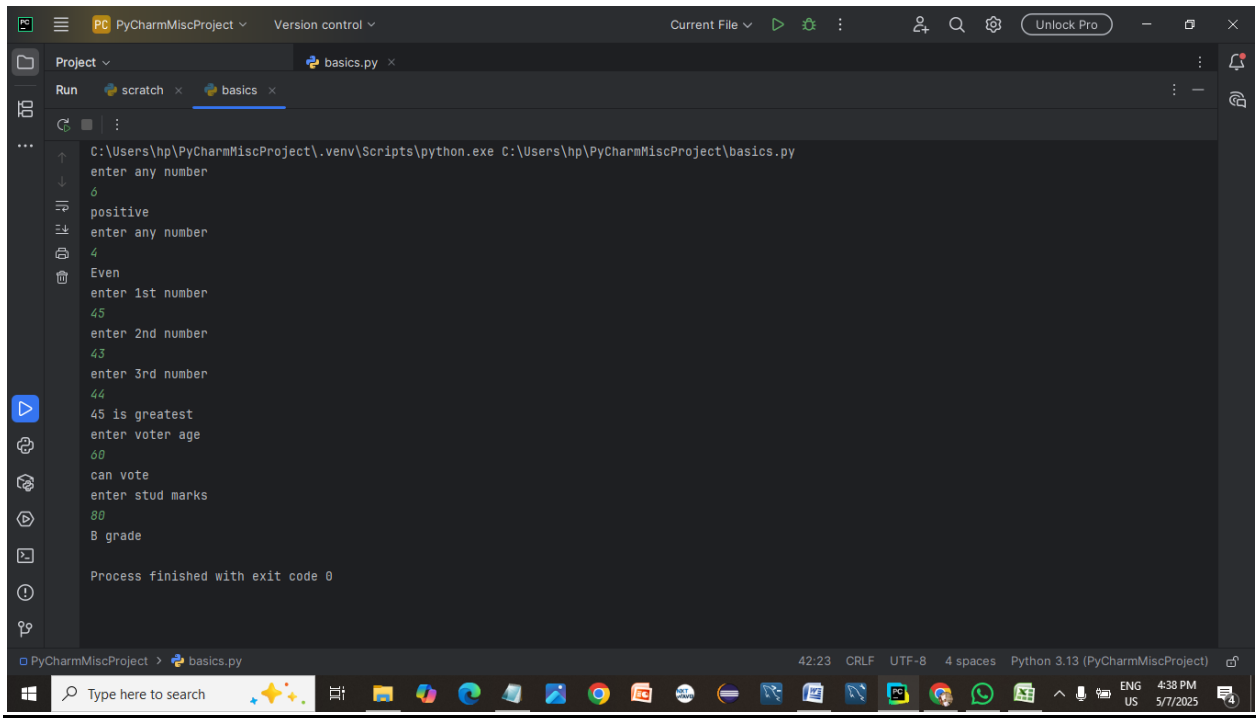
Hands_on: Conditional_Statements

```
'''
Exercise 1: Check if a number is positive, negative, or zero
# Exercise 2: Check if a number is even or odd
# Exercise 3: Find the largest among three numbers
# Exercise 4: Check if a person is eligible to vote (age >= 18)
# Exercise 5: Grade a student based on marks (A/B/C/Fail)
'''

#exer1
num=int(input("enter any number\n"))
if(num>0):
    print("positive")
elif(num<0):
    print("negative")
else:
    print("zero")
#exer2
num=int(input("enter any number\n"))
if(num%2==0):
    print("Even")
else:
    print("Odd")
#exer3
num1=int(input("enter 1st number\n"))
num2=int(input("enter 2nd number\n"))
num3=int(input("enter 3rd number\n"))
if(num1>num2):
    if(num1>num3):
        print(str(num1)+" is greatest")
    else:
        print(str(num2)+" is greatest")
else:
    if(num2>num3):
        print(str(num2)+" is greatest")
    else:
        print(str(num3)+" is greatest")
#exer4
age=int(input("enter voter age"))
if(age>=18):
    print("can vote")
else:
    print("cant vote")
#exer5
stud=int(input("enter stud marks"))
if(stud>85):
    print("A grade")
elif(stud>65 and stud <=85):
    print("B grade")
elif(stud>35 and stud<=65):
    print("C grade")
```

```
else:
    print("Fail!!!")
```

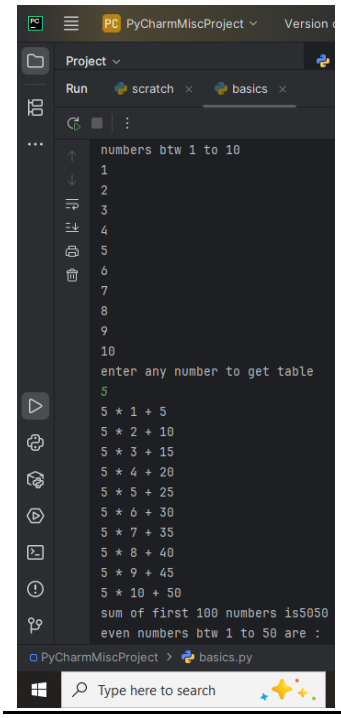
Output)

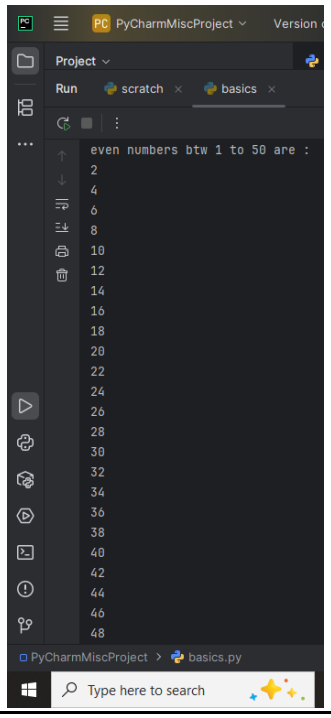


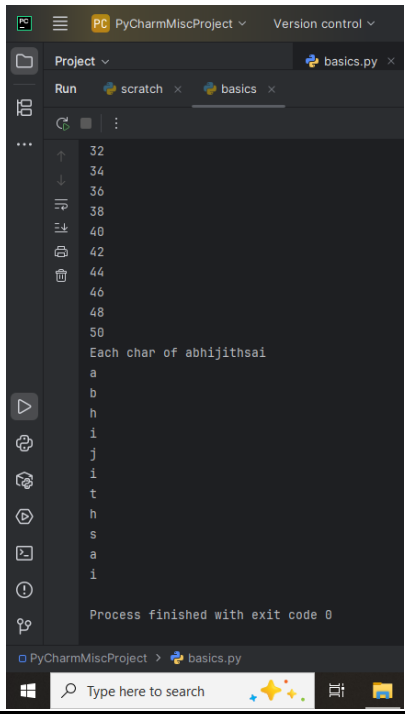
```python
'''Exercise 6: Print numbers from 1 to 10 using a for loop
# Exercise 7: Print the multiplication table of a given number
# Exercise 8: Calculate the sum of numbers from 1 to 100
# Exercise 9: Print all even numbers between 1 and 50
# Exercise 10: Loop through a string and print each character'''

#exer6
print("numbers btw 1 to 10")
for i in range(1,11):
    print(i)
#exer7
num=int(input("enter any number to get table\n"))
for i in range(1,11):
    print(str(num)+" * "+str(i)+" + "+str(num*i))
#exer8
tot=0
for i in range(1,101):
    tot=tot+i
print("sum of first 100 numbers is"+str(tot))
print("even numbers btw 1 to 50 are :")
#exer9
for i in range(1,51):
    if(i%2==0):
        print(i)
print("Each char of abhijithsai")
#exer10
name="abhijithsai"
for i in name:
    print(i)
```

Output)

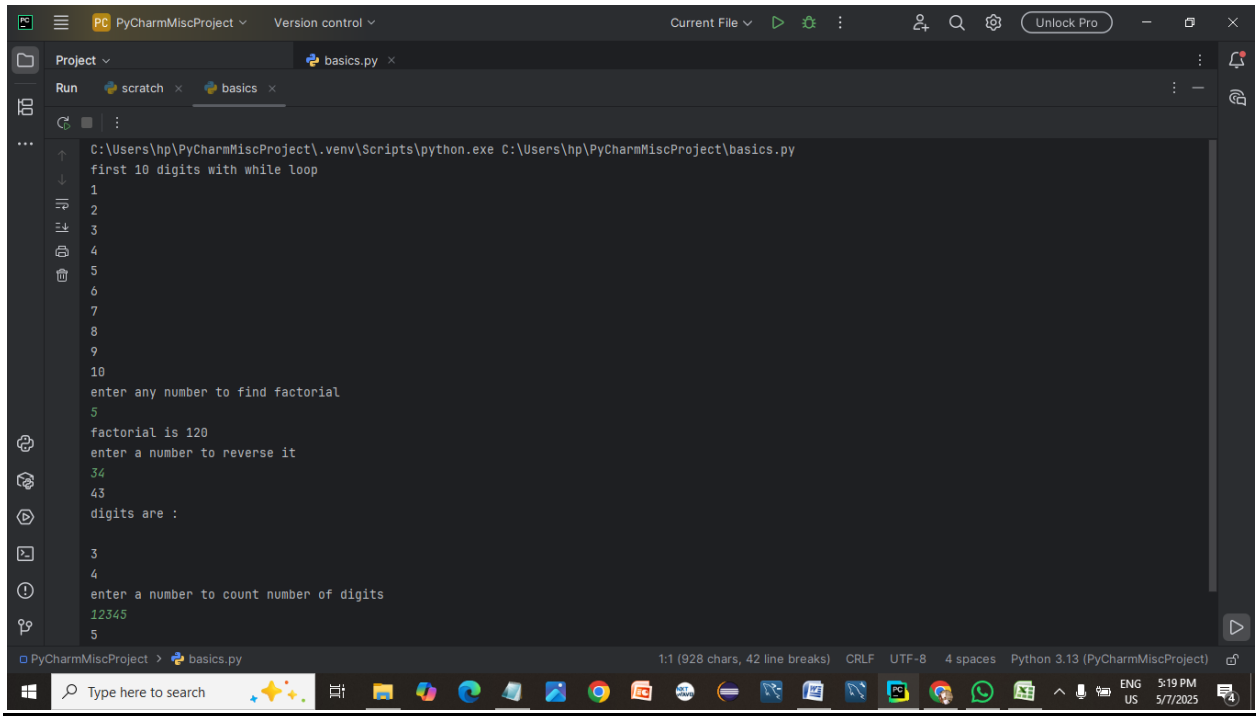






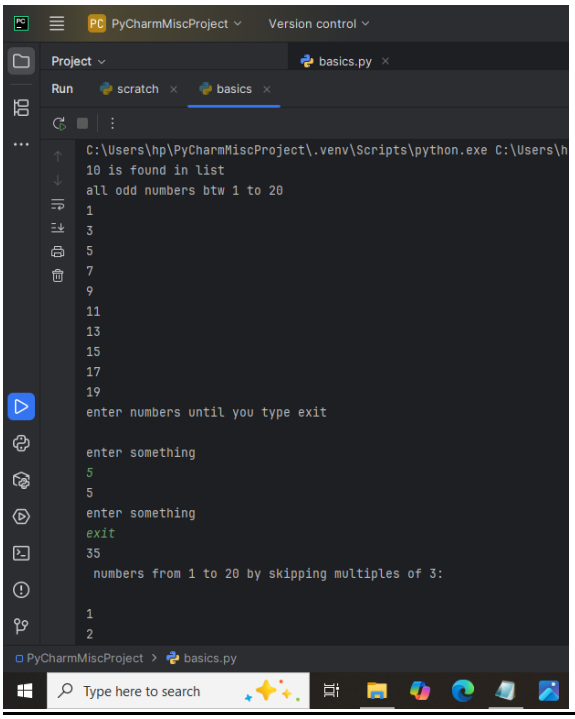
```
'''
# Exercise 11: Print numbers from 1 to 10 using while loop
# Exercise 12: Find the factorial of a number using while loop
# Exercise 13: Reverse a number using while loop
# Exercise 14: Print digits of a number one by one
# Exercise 15: Count the number of digits in a number
'''
#exer11
print("first 10 digits with while loop")
num=1
while(num<=10):
    print(num)
    num=num+1
#exer12
num=int(input("enter any number to find factorial\n"))
fact=1
while(num>0):
    fact=fact*num
    num=num-1
print("factorial is "+str(fact))
#exer13
num=int(input("enter a number to reverse it\n"))
sum=0
while(num>0):
    rem=num%10
    sum=sum*10+rem
    num=num//10
print(sum)
#exer14
print("digits are :\n")
num=sum
while(num>0):
    rem=num%10
    print(rem)
    num=num//10
#exer15
num=int(input("enter a number to count number of digits\n"))
count=0
temp=num
while(num>=1):
    count = count+1
    num=temp//10**count
print(count)
```

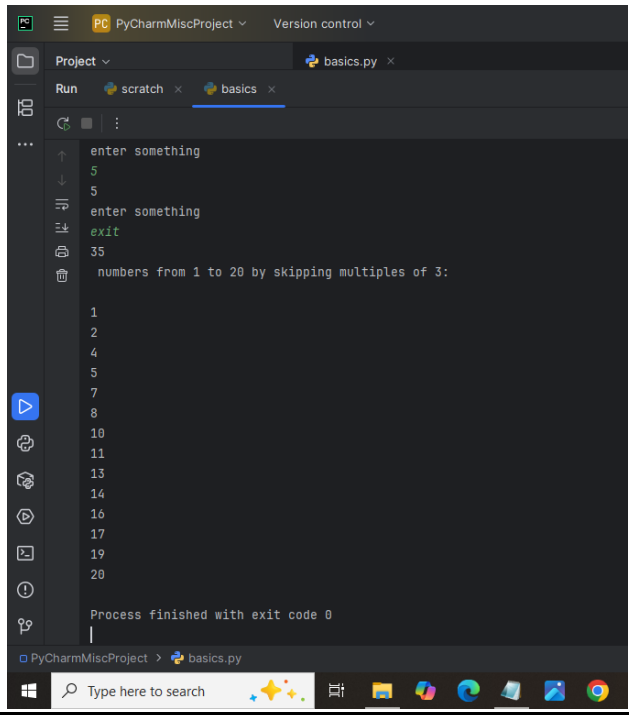
Output)


PyCharmMiscProject
Version control
Current File
Unlock Pro
Project
basics.py
Run
scratch
basics
C:\Users\hp\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\hp\PyCharmMiscProject\basics.py
first 10 digits with while loop
1
2
3
4
5
6
7
8
9
10
enter any number to find factorial
5
factorial is 120
enter a number to reverse it
34
43
digits are :
3
4
enter a number to count number of digits
12345
5
PyCharmMiscProject
basics.py
1:1 (928 chars, 42 line breaks)
CRLF
UTF-8
4 spaces
Python 3.13 (PyCharmMiscProject)
Type here to search
ENG
US
5:19 PM
5/7/2025

```
'''Exercise 16: Exit loop when a number is found (break)
# Exercise 17: Skip even numbers using continue
# Exercise 18: Keep asking user input until they type 'exit' (while + break)
# Exercise 19: Use a loop to find the first number divisible by 7 and 5
# Exercise 20: Print numbers from 1 to 20, skip multiples of 3'''
#exer16
list_a=[1,2,3,4,5,6,10,9,8,7]
temp=0
for i in list_a:
    if(i==10):
        temp=1
        print("10 is found in list")
        break
if(temp==0):
    print("not found")
#exer17
print("all odd numbers btw 1 to 20")
for i in range(1,21):
    if(i%2==0):
        continue
    else:
        print(i)
#exer18
print("enter numbers until you type exit\n")
inp="do"
while(inp == "do"):
    userInp=input("enter something\n")
    if(userInp.lower() == "exit"):
        break
    print(userInp)
#exer19 to find lcm ,lcm=a*b/hcf
num1=7
num2=5
num=num1*num2
while(num2>0):
    temp=num1
    num1=num2
    num2=temp%num2
hcf=num1
print(num//hcf)
#exer20
print(" numbers from 1 to 20 by skipping multiples of 3:\n")
for i in range(1,21):
    if(i%3!=0):
        print(i)
```

Output)

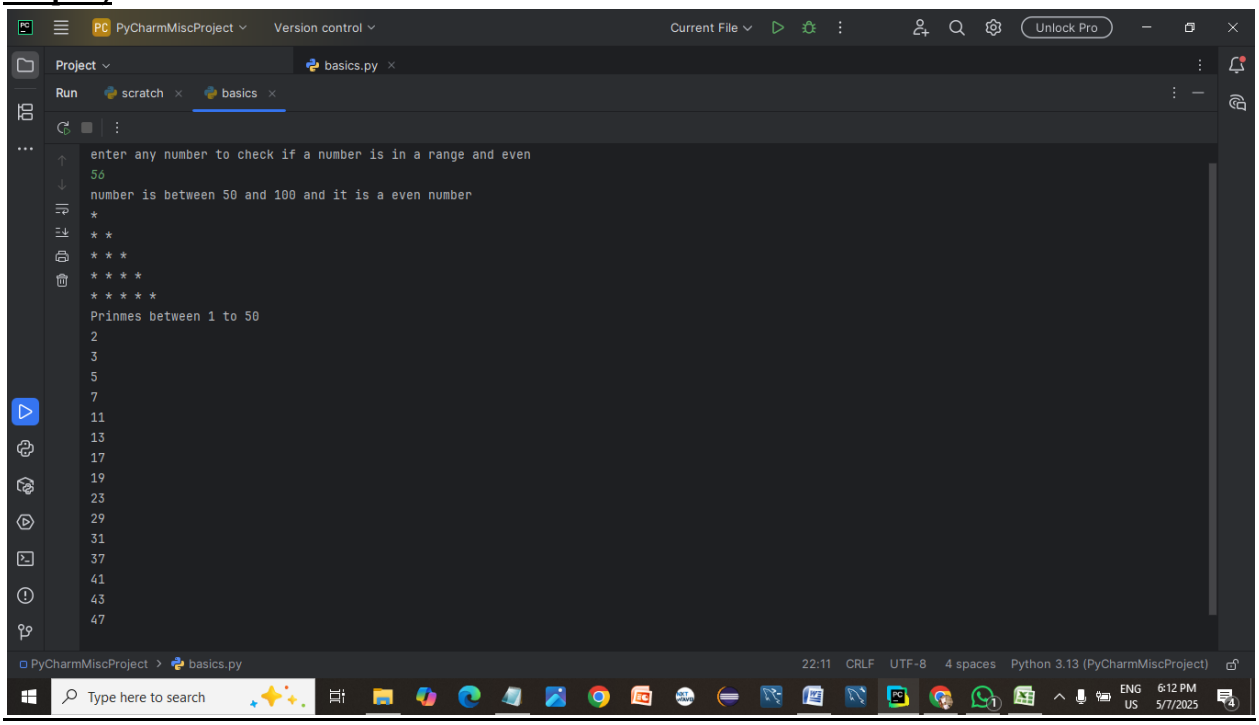

PyCharmMiscProject
Version control
Project
basics.py
Run
scratch
basics
C:\Users\hp\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\h
10 is found in list
all odd numbers btw 1 to 20
1
3
5
7
9
11
13
15
17
19
enter numbers until you type exit
enter something
5
5
enter something
exit
35
numbers from 1 to 20 by skipping multiples of 3:
1
2
PyCharmMiscProject
basics.py
Type here to search


PyCharmMiscProject
Version control
Project
basics.py
Run
scratch
basics
enter something
5
5
enter something
exit
35
numbers from 1 to 20 by skipping multiples of 3:
1
2
4
5
7
8
10
11
13
14
16
17
19
20
Process finished with exit code 0
PyCharmMiscProject
basics.py
Type here to search

```python
'''Exercise 21: Use nested if to check if a number is in a range and even
# Exercise 22: Nested loops to print a pattern (e.g. triangle of stars)
# Exercise 23: Print all prime numbers between 1 and 50'''
#exer21
num=int(input("enter any number to check if a number is in a range and
even\n"))
if(num%2==0):
    if(num>=50 and num<=100):
        print("number is between 50 and 100 and it is a even number")
    else:
        print("number is even but not in 50 to 100")
else:
    print("not even")
#exer22
for i in range(0,5):
    out=""
    for j in range(0,i+1):
        out+="* "
    print(out)
#exer23
print("Prinmes between 1 to 50")
for i in range(2,51):
    temp=0
    for j in range(2,int(i**0.5)+1):
        if(i%j==0):
            temp=1
            break

    if(temp==0):
        print(i)
```

Output)


PyCharmMiscProject
Version control
Current File
Unlock Pro
Project
basics.py
Run
scratch
basics
enter any number to check if a number is in a range and even
56
number is between 50 and 100 and it is a even number
*
* *
* * *
* * * *
* * * * *
Prinmes between 1 to 50
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
PyCharmMiscProject
basics.py
22:11
CRLF
UTF-8
4 spaces
Python 3.13 (PyCharmMiscProject)
Type here to search
ENG
US
6:12 PM
5/7/2025