

Hands-On:

```

#exercise1
print("Hello world!!")
#exercise2
name="abhijith"
age=23
print("Your name is "+name)
print("Your age is "+str(age))
#exercise3
print("hello\nworld\ngood\nmorning")
#exercise4
name="abhijith"
age=23
height=6.0
print(name)
print(age)
print(height)
#exercise5
name="vedantham"
print(name)
#exercise6
print(type(name))
print(type(age))
print(type(height))

```

Output for 1-6 exercises:

The screenshot shows the PyCharm IDE interface. The top toolbar includes icons for file operations, version control, and a 'Run' button. The main window displays the output of the script 'basics.py'. The output is as follows:

```

C:\Users\hp\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\hp\PyCharmMiscProject\basics.py
Hello world!!
Your name is abhijith
Your age is 23
hello
world
good
morning
abhijith
23
6.0
vedantham
<class 'str'>
<class 'int'>
<class 'float'>

Process finished with exit code 0

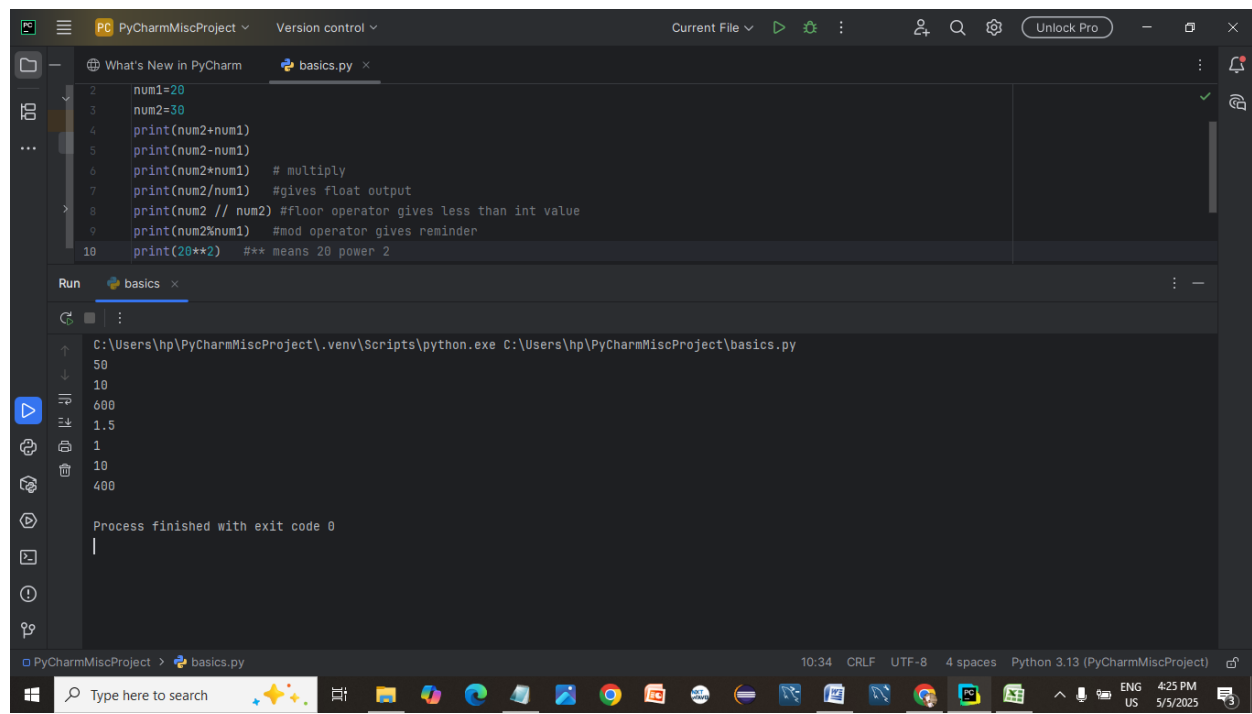
```

The bottom status bar indicates the file is 'basics.py' with 362 characters and 22 line breaks, using CRLF line endings, UTF-8 encoding, and 4 spaces for indentation. The Python interpreter is 3.13 (PyCharmMiscProject).

Exercise 7,8,9,10)

```
#exercise7,8,9,10
num1=20
num2=30
print(num2+num1)
print(num2-num1)
print(num2*num1)    # multiply
print(num2/num1)    #gives float output
print(num2 // num2) #floor operator gives less than int value
print(num2%num1)    #mod operator gives reminder
print(20**2)        #** means 20 power 2
```

Outputs for 7,8,9,10:



The screenshot shows the PyCharm IDE interface. The editor window displays the code from the exercise. The Run console shows the output of the script, which matches the expected results for the operations performed in the code.

```
Run basics
C:\Users\hp\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\hp\PyCharmMiscProject\basics.py
50
10
600
1.5
1
10
400

Process finished with exit code 0
```

```
'''
# Exercise 11: Take user input for name and greet them
# Exercise 12: Ask the user for two numbers and print their sum
# Exercise 13: Convert input string to integer using int()
# Exercise 14: Concatenate two strings
# Exercise 15: Print the length of a string using len()
'''

#exer11
name=input("enter ur name\n")
print("hello "+name+", good morning. Have a nice day...")
#exer12
print(int(input("enter num1\n")) + int(input("enter num2\n")))
#exer13
num=input("enter a num\n")
print(type(num))
num=int(num)
print(type(num))
#exer14
str1="abhijith"
str2="sai"
print(str1+str2)
#exer15
print("len of "+str1+" is "+ str(len(str1)))
```

Output)

The screenshot shows the PyCharm IDE interface. The top toolbar includes icons for file operations, running, and debugging. The main editor displays the Python code from the previous block. Below the editor, the 'Run' console shows the execution output. The output matches the expected results for the exercises: the name 'abhijith' is entered, followed by numbers 30 and 70, then 40. The program outputs a greeting, the sum 100, the concatenated string 'abhijithsai', and the length of 'abhijith' which is 8. The console also shows the command used to run the script and the exit code 0.

```
Run basics
C:\Users\hp\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\hp\PyCharmMiscProject\basics.py
enter ur name
abhijith
hello abhijith, good morning. Have a nice day...
enter num1
30
enter num2
70
100
enter a num
40
<class 'str'>
<class 'int'>
abhijithsai
len of abhijith is 8

Process finished with exit code 0
```

```
'''
# Exercise 16: Access characters from a string by index
# Exercise 17: Convert string to uppercase and lowercase
# Exercise 18: Replace a word in a sentence using replace()
# Exercise 19: Compare two numbers using ==, !=, >, <, >=, <=
'''

#exer16
name="abhiijithsai"
print(name[0])
print(name[5])
#exer17
print("upper case : "+ name.upper())
print("upper case : "+ name.lower())
#exer18
disc = "this is a old msg written by a old programmer"
print(disc)
print(disc.replace("old","new"))
#exer19
num1=10
num2=20
print(num1==num2)
print(num1>num2)
print(num1<num2)
print(num1<=num2)
print(num1>=num2)
```

Output)

The screenshot shows the PyCharm IDE interface. The top toolbar includes icons for file operations, running, and settings. The main editor displays the code from the previous block. Below the editor, the 'Run' tab is active, showing the command used to execute the script: `C:\Users\hp\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\hp\PyCharmMiscProject\basics.py`. The output window displays the following results:

```
a
i
upper case : ABHIJITHSAI
upper case : abhiijithsai
this is a old msg written by a old programmer
this is a new msg written by a new programmer
False
False
True
True
False
```

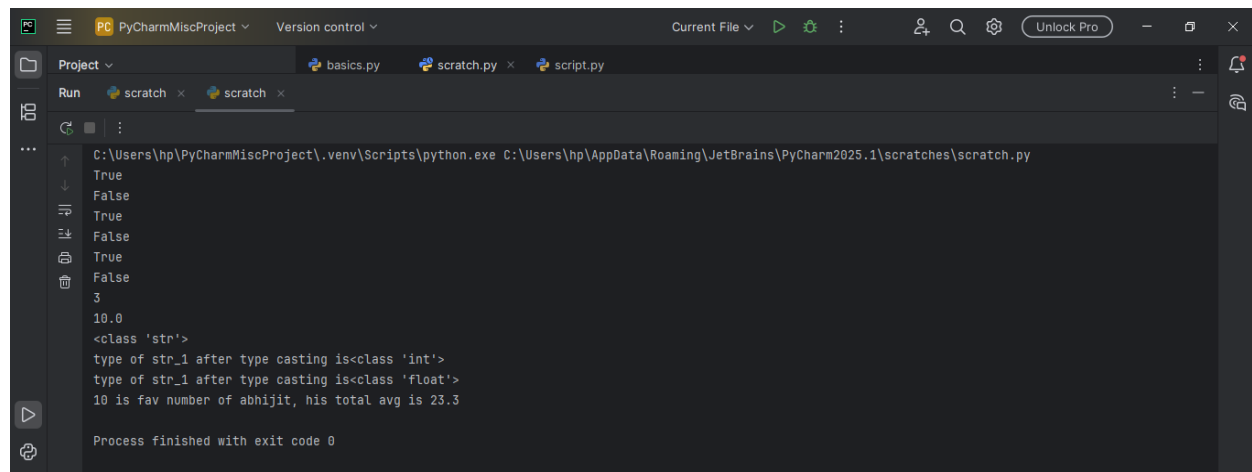
At the bottom, a status bar indicates the file encoding (UTF-8), indentation (4 spaces), and Python version (3.13).

Exercise 20-24)

```
# Exercise 20: Combine two conditions using and / or
# Exercise 21: Use bool() to convert values to True or False
# Exercise 22: Convert float to int and vice versa
# Exercise 23: Convert string to float and int (if possible)
# Exercise 24: Combine different data types using str()'''

#exer20
num=10
print((num>0) and (num%2==0))
num=-10
print((num>0) and (num%2==0))
num=10
print((num>0) or (num%2==0))
num=-11
print((num>0) or (num%2==0))
#exer21
Tcheck=bool(True)
Fcheck=bool(False)
print(Tcheck)
print(Fcheck)
#exer22
num1=10
num2=3.1427
print(int(num2))
print(float(num1))
#exer23
str_1="13"
print(type(str_1))
print("type of str_1 after type casting is"+str(type(int(str_1))))
print("type of str_1 after type casting is"+str(type(float(str_1))))
#exer24
num1=10
num2=23.3
name="abhijit"
print(str(num1)+" is fav number of " + name+", his total avg is "+str(num2))
```

Output



The screenshot shows the PyCharm IDE interface. The top toolbar includes icons for file operations, a search icon, and a 'Unlock Pro' button. The 'Project' panel on the left shows the file structure with 'scratch.py' selected. The 'Run' panel at the bottom displays the execution output of the script. The output shows the results of the conditional checks, type casting, and string concatenation. The process finished with exit code 0.

```
C:\Users\hp\PyCharmMiscProject\.venv\Scripts\python.exe C:\Users\hp\AppData\Roaming\JetBrains\PyCharm2025.1\scratches\scratch.py
True
False
True
False
True
False
3
10.0
<class 'str'>
type of str_1 after type casting is<class 'int'>
type of str_1 after type casting is<class 'float'>
10 is fav number of abhijit, his total avg is 23.3

Process finished with exit code 0
```

