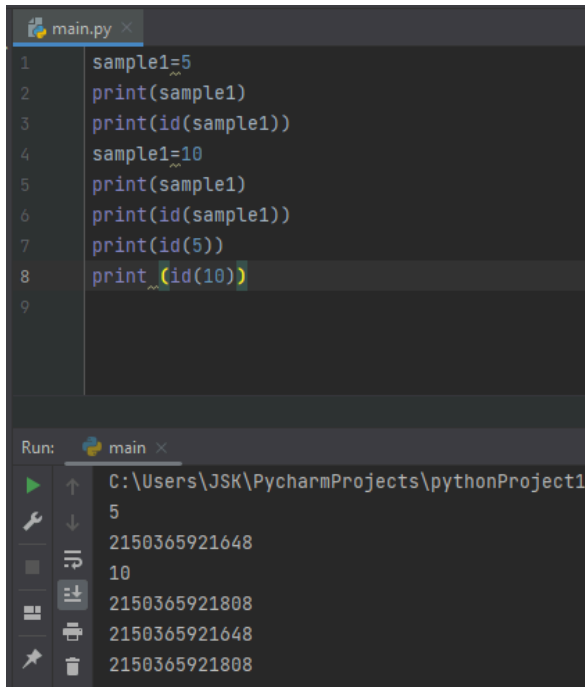


Practical

(a) Create python script to demonstrate Numeric datatype.

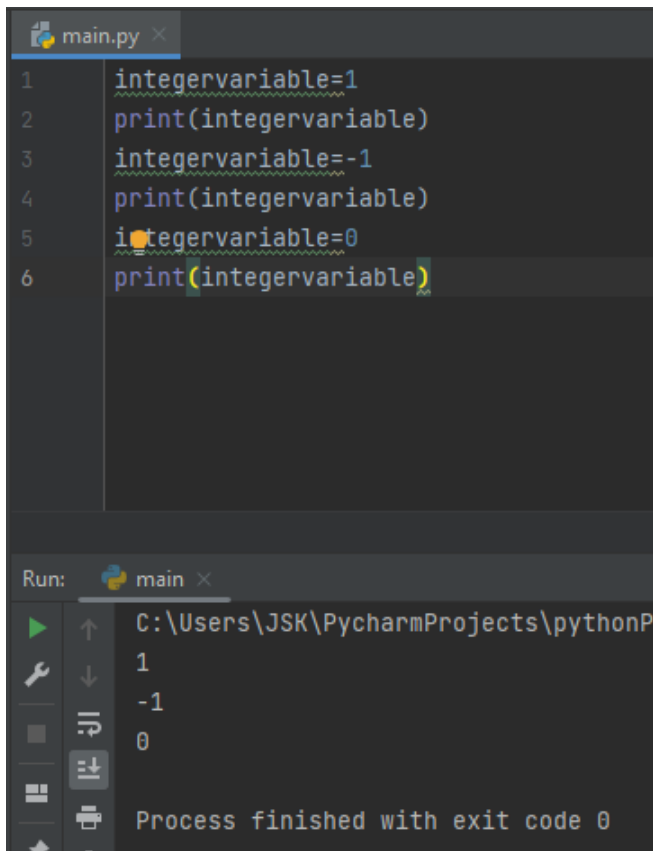


The screenshot shows a Python IDE with a file named `main.py`. The code in the editor is as follows:

```
1 sample1=5
2 print(sample1)
3 print(id(sample1))
4 sample1=10
5 print(sample1)
6 print(id(sample1))
7 print(id(5))
8 print(id(10))
9
```

Below the editor, the Run console shows the output of the script:

```
Run: main
C:\Users\JSK\PycharmProjects\pythonProject1
5
2150365921648
10
2150365921808
2150365921648
2150365921808
```

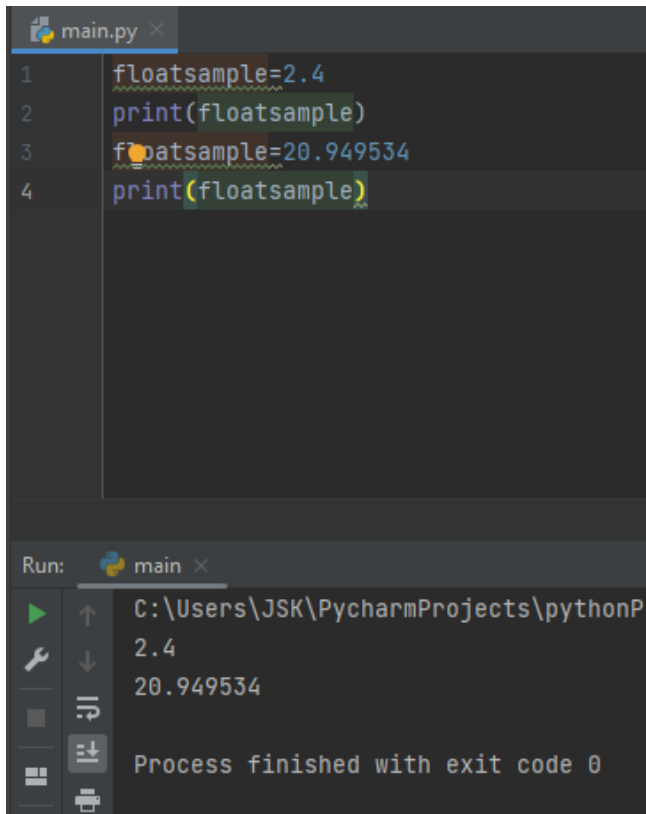


The screenshot shows a Python IDE with a file named `main.py`. The code in the editor is as follows:

```
1 integervariable=1
2 print(integervariable)
3 integervariable=-1
4 print(integervariable)
5 integervariable=0
6 print(integervariable)
```

Below the editor, the Run console shows the output of the script:

```
Run: main
C:\Users\JSK\PycharmProjects\pythonP
1
-1
0
Process finished with exit code 0
```

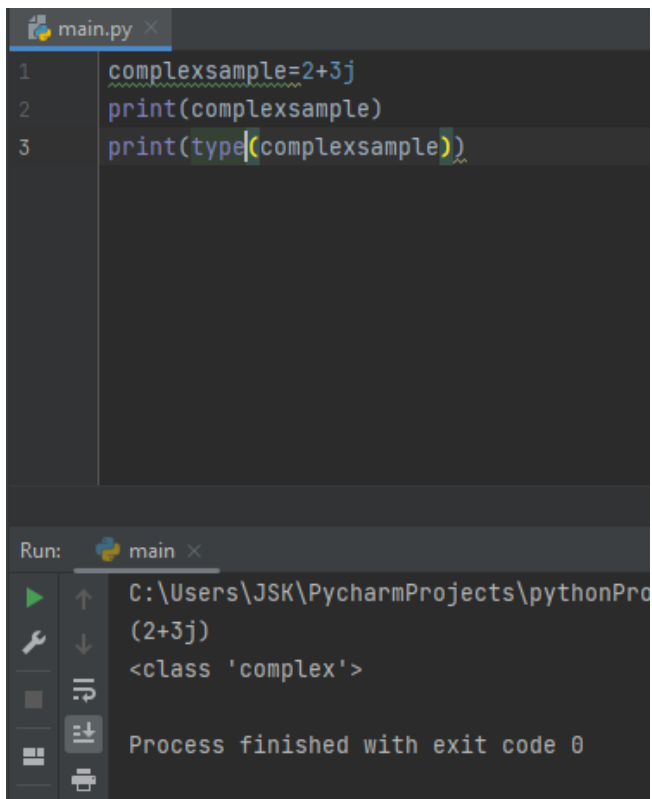


The screenshot shows the PyCharm IDE with a file named `main.py` open. The code in the editor is as follows:

```
1 floatsample=2.4
2 print(floatsample)
3 floatsample=20.949534
4 print(floatsample)
```

Below the editor, the Run window is visible, showing the execution of the script. The output is:

```
Run: main x
C:\Users\JSK\PycharmProjects\pythonP
2.4
20.949534
Process finished with exit code 0
```



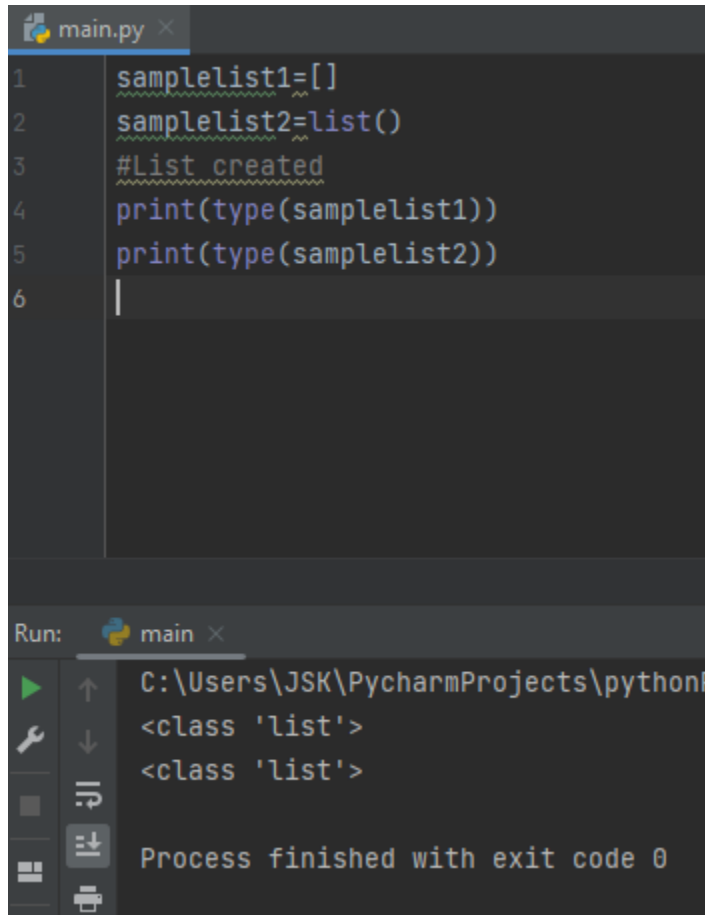
The screenshot shows the PyCharm IDE with a file named `main.py` open. The code in the editor is as follows:

```
1 complexsample=2+3j
2 print(complexsample)
3 print(type(complexsample))
```

Below the editor, the Run window is visible, showing the execution of the script. The output is:

```
Run: main x
C:\Users\JSK\PycharmProjects\pythonPro
(2+3j)
<class 'complex'>
Process finished with exit code 0
```

(b) Create python script to demonstrate list datatype.



```
main.py x
1 samplelist1=[]
2 samplelist2=list()
3 #List created
4 print(type(samplelist1))
5 print(type(samplelist2))
6

Run: main x
C:\Users\JSK\PycharmProjects\pythonP
<class 'list'>
<class 'list'>
Process finished with exit code 0
```

(c) Create python script to demonstrate various list functions.

```

main.py x
1  names=["ram", "rom", "mor"]
2  print(names)
3  numbers=list([11, 12, 13])
4  print(numbers)
5  Mixedlist=[11, "ram", 112.2]
6  print(Mixedlist)

```

```

Run: main x
C:\Users\JSK\PycharmProjects\pythonPr
['ram', 'rom', 'mor']
[11, 12, 13]
[11, 'ram', 112.2]

```

```

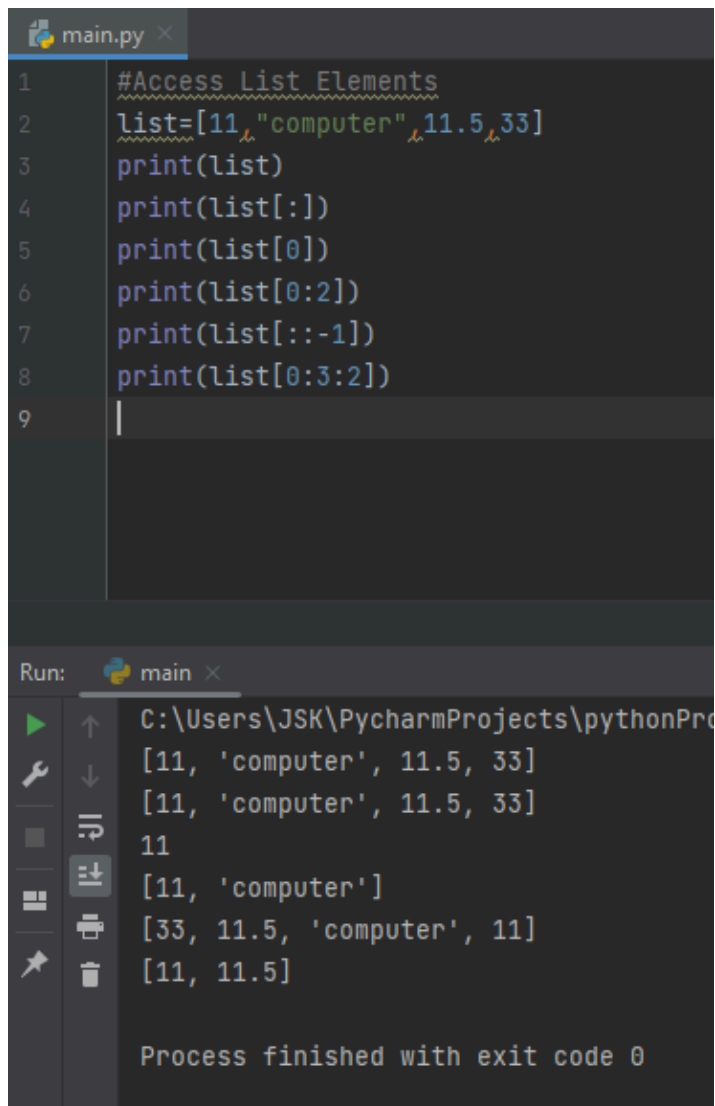
main.py x
1  #Access List Elements
2  list=[11, "computer", 11.5, 33]
3  print(list)
4  print(list[:])
5  print(list[0])
6  print(list[0:2])
7  print(list[::-1])
8  print(list[0:3:2])
9  list[0]="yatri"
10 print(list)
11 print(type(list))

```

```

Run: main x
C:\Users\JSK\PycharmProjects\pythonProje
[11, 'computer', 11.5, 33]
[11, 'computer', 11.5, 33]
11
[11, 'computer']
[33, 11.5, 'computer', 11]
[11, 11.5]
['yatri', 'computer', 11.5, 33]
<class 'list'>

```



The screenshot shows a Python IDE with a file named `main.py`. The code in the editor is as follows:

```

1  #Access List Elements
2  list=[11,"computer",11.5,33]
3  print(list)
4  print(list[:])
5  print(list[0])
6  print(list[0:2])
7  print(list[::-1])
8  print(list[0:3:2])
9

```

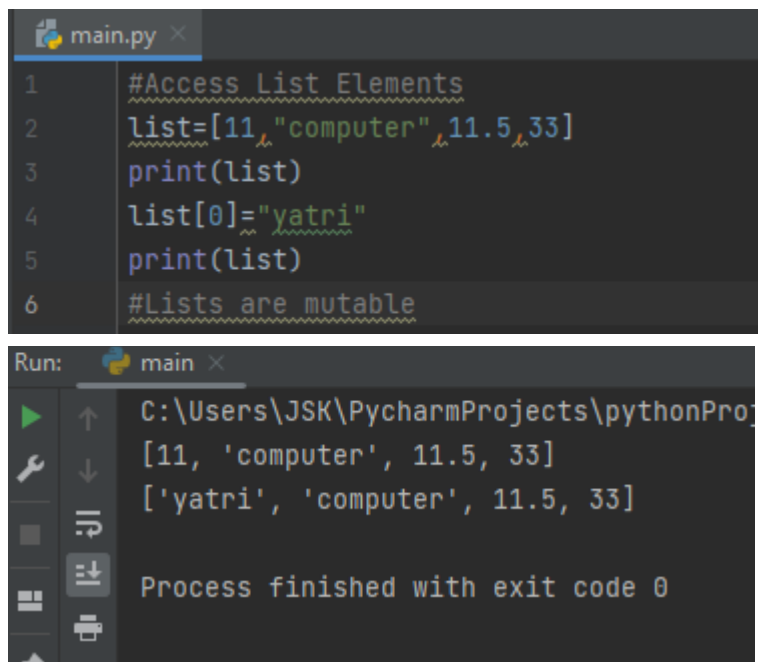
Below the editor is a 'Run' window showing the execution output:

```

C:\Users\JSK\PycharmProjects\pythonPro
[11, 'computer', 11.5, 33]
[11, 'computer', 11.5, 33]
11
[11, 'computer']
[33, 11.5, 'computer', 11]
[11, 11.5]

Process finished with exit code 0

```



The screenshot shows the same Python IDE with the `main.py` file. The code in the editor is as follows:

```

1  #Access List Elements
2  list=[11,"computer",11.5,33]
3  print(list)
4  list[0]="yatri"
5  print(list)
6  #Lists are mutable

```

Below the editor is a 'Run' window showing the execution output:

```

C:\Users\JSK\PycharmProjects\pythonPro
[11, 'computer', 11.5, 33]
['yatri', 'computer', 11.5, 33]

Process finished with exit code 0

```

```

*a.py - C:/Users/student/Desktop/a.py (3.10.5)*
File Edit Format Run Options Window Help

samplelist=[11,22,"computer",14.5]
samplelist[1:3]=["Engineer","Proud",44.4]
print(samplelist)
sample_mixed_list=["Computer",[11,22,33], True]
print(sample_mixed_list)
print(sample_mixed_list[1][2])
print(sample_mixed_list[0][2])
samplelist=[11,"yatri","yatrath","yuvraj",44.5,55]
del samplelist[3] #delete Element at Index 3
print(samplelist)
del samplelist[2:4]
print(samplelist)
del samplelist #delete whole list
print(samplelsit)

```

```

IDLE Shell 3.10.5
File Edit Shell Debug Options Window Help

Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/student/Desktop/a.py =====
[11, 'Engineer', 'Proud', 44.4, 14.5]
['Computer', [11, 22, 33], True]
33
m
[11, 'yatri', 'yatrath', 44.5, 55]
[11, 'yatri', 55]
Traceback (most recent call last):
  File "C:/Users/student/Desktop/a.py", line 14, in <module>
    print(samplelsit)
NameError: name 'samplelsit' is not defined

```

```

a.py - C:/Users/student/Desktop/a.py (3.10.5)
File Edit Format Run Options Window Help

samplelist1=[11,22,44,55,77]
samplelist2=[22,33,66]
merged_Sample=samplelist1+samplelist2 #merge the lists
print(merged_Sample)

```

```

===== RESTART: C:/Users/student/Desktop/a.py =====
[11, 22, 44, 55, 77, 22, 33, 66]
>>>

```

IDLE Shell 3.10.5

File Edit Shell Debug Options Window Help

Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 b
AMD64] on win32
Type "help", "copyright", "credits" or "license()" for more information.

```

>>> sample=[11,22,33]
>>> copyList=sample.copy()
>>> print(copyList)
[11, 22, 33]
>>> postion=sample.index(11)
>>> print(position)
Traceback (most recent call last):
  File "<pyshell#4>", line 1, in <module>
    print(position)
NameError: name 'position' is not defined. Did you mean: 'postion'?
>>> print(postion)
0
>>> print(len(sample)) #find number of elements in list
3
>>> print(min(sample)
...     )
11
>>> print(max(sample))
33
>>> totalitem=sample.count(22)
>>> print("item count=",totalitem)
item count= 1
>>> samplelist.sort(reverse=True)
Traceback (most recent call last):
  File "<pyshell#12>", line 1, in <module>
    samplelist.sort(reverse=True)
NameError: name 'samplelist' is not defined
>>> sample.sort(reverse=True)
>>> print(sample)
[33, 22, 11]
>>> sample.sort()
>>> print(sample)
[11, 22, 33]
>>> sample.reverse()
>>> print(sample)
[33, 22, 11]
>>>

```

Activate Windows
Go to Settings to activate Windows.

Ln: 3