1) Create three variables in a single line and assign values to them in such a manner that each one of them belongs to a different data type.

Code:

```
x,y,z = 10, 2.08, 'hello'
```

Result:

```
>>> print x
10
>>> print y
2.08
>>> print z
hello
>>> type(x)
<type 'int'>
>>> type(y)
<type 'float'>
>>> type(z)
<type 'str'>
>>>
```

2) Create a variable of type complex and swap it with another variable of type integer.

Code:

```
a = 3 + 5j
b = 5
c = a # using third variable to swap
a = b
b = c
```

Result:

```
# Before Swap
>>> type(a)
<type 'complex'>
>>> type(b)
<type 'int'>
```

```
# After Swap
>>> print a
5
>>> type(a)
<type 'int'>
>>> print b
(3+5j)
>>> type(b)
<type 'complex'>
```

3) Swap two numbers using a third variable and do the same task without using any third variable.

Code:

```
# Swap by using third variable
a = 10
b = 20
c = a
a = b
b = c

# Swap without using third variable
a = 'one'
b = 'two'
a,b = b,a
```

Result:

```
# Using third Variable
# Before Swap
>>> print a
10
>>> print b
20
```

```
# After Swap
>>> print a
20
>>> print b
10


# Without using third Variable
# Before Swap
>>> print a
one
>>> print b
two
# After Swap
>>> print a
two
>>> print b
one
```

4) Write a program that takes input from the user and prints it using both Python 2.x and Python 3.x Version.

Code:

```
inp = input("Enter desired value to be printed")
print("Desired value is:")
print(inp)
```

5) Write a program to complete the task given below:
Ask users to enter any 2 numbers in between 1-10 , add the two numbers and keep the sum in another variable called z. Add 30 to z and store the output in variable result and print result as the final output.

Code:

```
inp1, inp2 = input("Enter two numbers between 1 and 10: ")
z = inp1 + inp2
result = z + 30
print("Final result is:")
```

```
print(result)
```

Result:

```
python % python inp.py
Enter two numbers between 1 and 10: 5, 10
Final result is:
45
vkurakundi@Vishwas-Mini python %
```

6) Write a program to check the data type of the entered values

Code:

```
inp = input("Enter some data :")
type_of_data = type(inp)
print("Type of data is :")
print(type_of_data)
```

7) Create Variables using formats such as Upper CamelCase, Lower CamelCase, SnakeCase and UPPERCASE.

Code:

```
helloWorld = “lower camel case”
HelloWorld = “upper camel case”
hello_world = “snake case”
HELLOWORLD = “upper case”
```

8) If one data type value is assigned to ‘a’ variable and then a different data type value is assigned to ‘a’ again. Will it change the value? If Yes then Why?

Answer: Yes, it will change the value, as Python overwrites the previous variable.