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Sample Python Programs

Strings in python:

```
my_string = ‘Hello’
 print(my_string)
 my_string = “Hello”
print(my_string)
```

String slicing in python:

```
my_string = "This is MY string!“ # From the start till before the 4th index
print(my_string[0:4])
 print(my_string[1:7]) # 2nd to 7th
```

Answer: This
Is his

if, else, elif clauses in python

```
num = -3
if num > 0:
    print(num, "is a positive number")
elif num==0:
    print(num, "is zero")
else:
    print(num, "is negative")
print("this is always printed")
```

Answer:
-3 is negative
this is always printed

For Loop

```
# iterate over a string
index = 0
my_str = "ISGH JOB Network"
for c in my_str:
    print(f"{index:2d}: {c}")
index += 1
```

Answer:0:
 0: N
 0: e
 0: t
 0: w

```
 0: o
 0: r
 0: k
➜
```

While Loop:

```
# Python program to illustrate
# while loop
count = 0
while (count < 3):
    count = count + 1
print(f"Salam - {count}")
```

Answer:Salam - 3

Lists:

```
# define a list
my_list = [“Toyota”, “Honda", “Ford"] print(my_list)
 print(len(my_list)) ## to get the length of a list
```

Answer:

```
['Toyota', 'Honda', 'Ford']
3
```

Tuples :

```
# Tuples
 tuple1 = (“John", 40, True, "male")
 tuple2 = (“Texas”, “Houston”) len(tuple1
print(tuple1+tuple2)
```

Answer:('John', 40, True, 'male', 'Texas', 'Houston')

Sets:

```
#Sets
fruit_set = {"apple", "banana", "cherry", "apple"}
 print(fruit_set )
 set1 = {"abc", 34, True, 40, "male"} # can take all elements type
```

Dictionaries:

```
words = ['data', 'science', 'machine', 'learning']
seacrh_count = [5, 3, 1, 8]
dict_a = {w:s for w, s in zip(words, seacrh_count)}
dict_b = {w.upper() : s ** 2 for w, s in zip(words, seacrh_count)}
print(dict_a)
print(dict_b)
```

Answer:{'data': 5, 'science': 3, 'machine': 1, 'learning': 8}

{'DATA': 25, 'SCIENCE': 9, 'MACHINE': 1, 'LEARNING': 64}