In [1]:
```
def func(a, b):
    while b:
        a, b = b, a % b
    return a

r= func(30, 75)
print(r)
```

```
15
```

In [3]:
```
numbers = (4, 7, 19, 2, 89, 45, 72, 22)
sorted_numbers = sorted(numbers)
even = lambda a: a % 2 == 0
even_numbers = filter(even, sorted_numbers)
print(type(even_numbers))
```

```
<class 'filter'>
```

In [11]:
```
def a (*args):
    print(type(args))  # This will print the type of args

a()
```

```
<class 'tuple'>
```

In [13]:
```
set1 = {14, 3, 55}
set2 = {82, 49, 62}
set3 = {99, 22, 17}

# Combine sets using union
combined_set = set1 | set2 | set3  # or use set1.union(set2).union(set3)
print(len(combined_set))
```

```
9
```

In [ ]:
```
#What keyword is used in Python to raise exceptions?
#Ans.Raise
```

In [ ]:
```
#Which of the following modules need to be imported to handle date time computations i
#Python?
#datetime
```

In [14]:
```
print(4**3 + (7 + 5)**(1 + 1))
```

```
208
```

In [ ]:
```
#The Python tuple is immutable in nature
```

In [ ]:
```
#The __range_ is a built-in function that returns a range object that consists series
we can iterate using a for loop.
```

In [ ]:
```
#Amongst which of the following is a function which does not have any name?
#Lambda Function
```

In [ ]:
```
#The module Pickle is used to serializing and deserializing
```

In [ ]:
```
#Amongst which of the following is / are the method of convert Python objects for writ
#a binary file?
# Dump Method
#Amongst which of the following is / are the method used to unpickling data from a bin
#load()
#A text file contains only textual information consisting of ___.
# All of the above mentioned (Alphabets .Numbers and Special symbols)
```

In [6]:
```
captains = {
            "Enterprise": "Picard",
            "Voyager": "Janeway",
            "Defiant": "Sisko",
           }
for ship, captain in captains.items():
    print(f"{ship} {captain}")
```

```
Enterprise Picard
Voyager Janeway
Defiant Sisko
```

In [ ]:
```
# code will create an empty dictionary named captains?
# captains = {}
```

In [ ]:
```
#Now you have your empty dictionary named captains. It’s time to add some data!
#Specifically, you want to add the key-value pairs "Enterprise": "Picard", "Voyager":
#and "Defiant": "Sisko".
#Ans.C
captains = {
            "Enterprise": "Picard",
            "Voyager": "Janeway",
            "Defiant": "Sisko",
           }
```

In [9]:
```
captains = {
    "Enterprise": "Picard",
    "Voyager": "Janeway",
    "Defiant": "Sisko",
    "Discovery": "unknown",
}

# Displaying ship and captain names with additional context
for ship, captain in captains.items():
    if captain == "unknown":
        print(f"The captain of {ship} is unknown.")
    else:
        print(f"The captain of {ship} is {captain}.")
```

```
The captain of Enterprise is Picard.
The captain of Voyager is Janeway.
The captain of Defiant is Sisko.
The captain of Discovery is unknown.
```

In [ ]:
```
#What statement will remove the entry for the key "Discovery"?
#del captains["Discovery"]
```