

7. Develop programs to learn regular expressions using python

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1.# Python program to handle simple runtime error

```
#Python 3
a = [1, 2, 3]
try:
    print ("Second element = %d" %(a[1]))
    # Throws error since there are only 3 elements in array
    print ("Fourth element = %d" %(a[3]))
except:
    print ("An error occurred")
```

Output:

Second element = 2
An error occurred

2. # Program to handle multiple errors with one

```
# except statement
# Python 3
def fun(a):
    if a < 4:
        # throws ZeroDivisionError for a = 3
        b = a/(a-3)
    # throws NameError if a >= 4
    print("Value of b = ", b)
try:
    fun(3)

# note that braces () are necessary here for
except ZeroDivisionError:
    print("ZeroDivisionError Occurred and Handled")
except NameError:
    print("NameError Occurred and Handled")
```

Output:

ZeroDivisionError Occurred and Handled

3. # Python program to demonstrate finally

```
# No exception Exception raised in try block
try:
    k = 5//0 # raises divide by zero exception.
    print(k)
# handles zerodivision exception
except ZeroDivisionError:
    print("Can't divide by zero")
```

finally:

```
# this block is always executed  
# regardless of exception generation.  
print('This is always executed')
```

Output:

*Can't divide by zero
This is always executed*

3. Program to check positive number or not

try:

```
a = int(input("Enter a positive integer: "))  
if a <= 0:  
    print("That is not a positive number!")  
else:  
    print("That is a positive number")  
except:  
    print("Wrong operation")
```

Output:

*Enter a positive integer: 2
That is a positive number
Enter a positive integer: -2
That is not a positive number!
Enter a positive integer: p
Wrong operation*