```python
#Exercise 1: Write a python program to read a file and display its contents

def read_file(file_path):
  try:
    with open(file_path, 'r') as file:
      contents = file.read()
      print(contents)
  except FileNotFoundError:
    print("The specified file does not exist.")


#usage
read_file('/content/python_program.txt')
```

```
This is a python program to read and display its contents.
```

```python
[5] #Exercise 2: write a python program to copy the contents of one file to another file

def copy_file(source_file, destination_file):
  try:
    with open(source_file, 'r') as src, open(destination_file, 'w') as dest:
      dest.write(src.read())
    print("File copied successfully.")
  except FileNotFoundError:
    print("Source file not found")

#usage
copy_file('/content/python_program.txt', '/content/python_program_copy.txt')
```

```
File copied successfully.
```

```python
[7] #Exercise 3: write a python program to read the content of a file and count the total number of words in that file.

def count_words_in_file(file_path):
  try:
    with open(file_path, 'r') as file:
      contents = file.read()
      words = contents.split()
```

```
File copied successfully.
```

[7]
```python
#Exercise 3: write a python program to read the content of a file and count the total number of words in that file.

def count_words_in_file(file_path):
  try:
    with open(file_path, 'r') as file:
      contents = file.read()
      words = contents.split()
      print("Total number of words : ", len(words))
  except FileNotFoundError:
    print("The specified file does not exist.")

#usage
count_words_in_file('/content/python_program.txt')
```

```
Total number of words :  11
```

[15]
```python
#Exercise 4: write a python program that prompts the user to input a string and converts it to an integer.
#Use try_except blocks to handle any exception that might occur.

def convert_to_integer():
  try:
    user_input = input("Enter a number : ")
    number = int(user_input)
    print("You entered : ", number)
  except ValueError:
    print("Invalid input! Please enter an integer.")


#usage
convert_to_integer()
```

```
Enter a number : 250
You entered :  250
```

[19]
```python
#Exercise 5: write a python program that prompts the user to input a list of integers and raises an exception
#if any of the ingeres in the list are negative.
```

```
[15]    except ValueError:
          print("Invalid input! Please enter an integer.")


        #usage
        convert_to_integer()
```

```
Enter a number : 250
You entered :  250
```

```
[19] #Exercise 5: write a python program that prompts the user to input a list of integers and raises an exception
     #if any of the ingeres in the list are negative.

     def check_positive_integers():
       try:
         user_input = input("Enter a list of integers separated by space : ")
         numbers = list(map(int, user_input.split()))
         for num in numbers:
           if num < 0:
             raise ValueError("Negative integer found!")
         print("All numbers are non-negative.")
         print("List of integers : ", numbers)
       except ValueError as e:
         print(e)

     #usage
     check_positive_integers()
```

```
Enter a list of integers separated by space : 10 20 30 40 50 60 70
All numbers are non-negative.
List of integers :  [10, 20, 30, 40, 50, 60, 70]
```

```
[20] #Exercise 6: python program that prompts the user to input a list of integers and computes the average of those integers.
     #use try-except blocks to handle any exceptions that might occur.
     #use the finally clause to print a message indicating that the program has finished running.

     def compute_average():
       try:
         user_input = input("Enter a list of integers separated by space :")
         numbers = list(map(int, user_input.split()))
         for num in numbers:
```

```
check_positive_integers()
```

[19]

```
Enter a list of integers separated by space : 10 20 30 40 50 60 70
All numbers are non-negative.
List of integers :  [10, 20, 30, 40, 50, 60, 70]
```

```
#Exercise 6: python program that prompts the user to input a list of integers and computes the average of those integers.
#use try-except blocks to handle any exceptions that might occur.
#use the finally clause to print a message indicating that the program has finished running.

def compute_average():
  try:
    user_input = input("Enter a list of integers separated by space :")
    numbers = list(map(int, user_input.split()))
    for num in numbers:
      if num < 0:
        raise ValueError("Negative integer found!")
    average = sum(numbers) / len(numbers)
    print("All numbers are non-negative")
    print("List of integers : ", numbers)
    print("Average of list :", average)
  except ValueError:
    print("Invalid input! Please enter integers only.")
  except ZeroDivisionError:
    print("No numbers were provided to calculate the average.")
  finally:
    print("Program has finished running.")

#usage
compute_average()
```

```
Enter a list of integers separated by space :10 20 30 40 50 60 70
All numbers are non-negative
List of integers :  [10, 20, 30, 40, 50, 60, 70]
Average of list : 40.0
Program has finished running.
```

[21]

```
#Exercise 7: python program that prompts the user to input a filename and writes a string to that file.
#use try-except blocks to handle any exceptions that might occur
#print a welcome message if there is no exception occured.
```

```
All numbers are non-negative
List of integers :  [10, 20, 30, 40, 50, 60, 70]
Average of list : 40.0
Program has finished running.
```

```python
#Exercise 7: python program that prompts the user to input a filename and writes a string to that file.
#use try-except blocks to handle any exceptions that might occur
#print a welcome message if there is no exception occured.

def write_to_file():
  try:
    file_name = input("Enter the filename: ")
    content = input("Enter the content to write to the file: ")
    with open(file_name, 'w') as file:
      file.write(content)
    print("File written successfully, Welcome!")
  except Exception as e:
    print("An error occured : ", e)

#usage
write_to_file()
```

```
Enter the filename: write_to_file.txt
Enter the content to write to the file: This is a python program that prompts the user to input a filename and writes a string to that file.
File written successfully, Welcome!
```

Start coding or generate with AI.