User Defined Exceptions in Python

Python throws errors and exceptions, when there is a code gone wrong, which may cause program to stop abruptly.
Python also provides exception handling method with the help of try-except. Some of the standard exceptions which are most frequent include IndexError, ImportError, IOError, ZeroDivisionError, TypeError and FileNotFoundError.
A user can create his own error using exception class.
Programmers may name their own exceptions by creating a new exception class.
Exceptions need to be derived from the Exception class, either directly or indirectly.

Consider below example which demonstrates user define exceptions in Python

```
1  class AgeInvalid(Exception):
2      def __init__(self, value):
3          self.value = value
4
5  def main():
6      try:
7          age = int(input("Enter your age"));
8          if (age < 18):
9              raise (AgeInvalid("Age is invalid"));
10
11     except AgeInvalid as error:
12         print('A New Exception occured: ',error.value)
13
14 if __name__ == "__main__":
15     main();
16
```

Output of above application

```
Desktop — -bash — 51×20
(base) MacBook-Pro-de-MARVELLOUS:Desktop marvellous
$ python hello.py
Enter your age12
A New Exception occured:  Age is invalid
(base) MacBook-Pro-de-MARVELLOUS:Desktop marvellous
$ python hello.py
Enter your age29
(base) MacBook-Pro-de-MARVELLOUS:Desktop marvellous
$
```