Just run ‘ErrorComputation.m’, it invokes function in ‘FiniteDifferenceMethod.m’.

See pictures in the folder for plots of the computed approximation of the American Put and the free boundary.

We can see with the sizes of mesh increasing, the free boundary becomes smoother. But the American Put values don’t have significant changes.

The results of error and order of convergence are as follow:

```
>> ErrorComputation


mesh =

      16       32       64      128      256      512     1024


Error =

    NaN   2.2605   1.1164   0.5562   0.2763   0.1378   0.0688


OrderOfConvergence =

    NaN      NaN   1.0178   1.0051   1.0095   1.0041   1.0021
```