HW 12 - turn in one week from today in Canvas

Turn in the following question as a single .py file onto canvas. Use comments to clearly indicate which question you are working on. Your filename should end as _py2.py if you use Python2 and _py3.py if you use Python3.

Recall the data generated on the last HW:

```
import numpy as np
import matplotlib.pyplot as plt
np.random.seed(1)
x = np.random.random(20)*2.0
noise = np.random.normal(size=20)
y = 2.0*x - 3.2 + noise
plt.figure()
plt.plot(x,y,'o')
plt.show()
```

Continued on the next page...

HW 12 - turn in one week from today in Canvas

Use five fold cross validation (CV) to select which regression model is the most appropriate (linear model, quadratic polynomial degree=2, polynomial degree=10).

1. Calculate the the R^2 value (on the test set) for each model during each CV iteration.
2. Print the average R^2 value for each model.
3. Select which model had the highest average R^2 as the best model for this data. Print which model was the best.