# Homework Week 7

## Part 1

1) The following class is an example of

```python
class Stuff(nn.Module):
        def __init__(self,in_size,output_size):
                super(LR, self).__init__()
                self.linear=nn.Linear(in_size,output_size)

        def forward(self,x):
                out=  F.sigmoid( self.linear(x) )
                return out
```

      A.  Linear regression
      B.  Logistic regression
      C.  SoftMax regression
      D.  None of the above

2) Consider the class **Stuff** we create the following object **model**, model=stuff(2,1) we is the range of the output of **yhat=model(x)**
      A.  Between 0 and 1
      B.  Between -1 and 1
      C.  Any real number
      D.  None of the above

3) The following class is an example of

```python
class Stuff_1(nn.Module):
        def __init__(self,in_size,output_size):
                super(LR, self).__init__()
                self.linear=nn.Linear(in_size,output_size)

        def forward(self,x):
                out=    self.linear(x) )
                return out
```

      A. Linear regression
      B. Logistic regression
      C. SoftMax regression
      D. None of the above

4) Consider the class **Stuff_1** we create the following object **model** model=stuff_1(2,3) we train the method using cross-entropy loss, how many class perditions can we output.

A. 1
B. 2
C. 3
D. None of the above


5) What loss function would you use to train a logistic regression model
    A. nn.CrossEntropyLoss()
    B. nn.BCELoss()
    C. nn.MSELoss()
    D. None of the above

6) The following is the output of a SoftMax classifier  what is the class

| 100 | 1 | 3 | 4 |
|-----|---|---|---|


Solutions

1. B
2. B
3. A,C
4. C'
5. A
6. 0