

Writing my own Algorithm.

```
class My_GradientDescent:
```

```
    def __init__(self, learning_rate, epochs): # Constructor
```

```
        self.m = -180
```

```
        self.b = +350
```

```
        self.learning_rate = learning_rate
```

```
        self.epochs = epochs
```

```
    def fit(self, X_train, Y_train):
```

```
        for a in range(self.epochs):
```

```
            # Calculating the slope of b..
```

```
            loss_slope_b = (-2 * np.sum(Y_train - self.m * X_train - self.b))
```

```
            # Updating the value of b..
```

```
            self.b = self.b - (self.learning_rate * loss_slope_b))
```

```
            # Calculating the slope of m..
```

```
            loss_slope_m = (-2 * np.sum((Y_train - self.m * X_train - self.b) * X_train))
```

```
            # Updating the value of m..
```

```
            self.m = (self.m - (self.learning_rate * loss_slope_m))
```

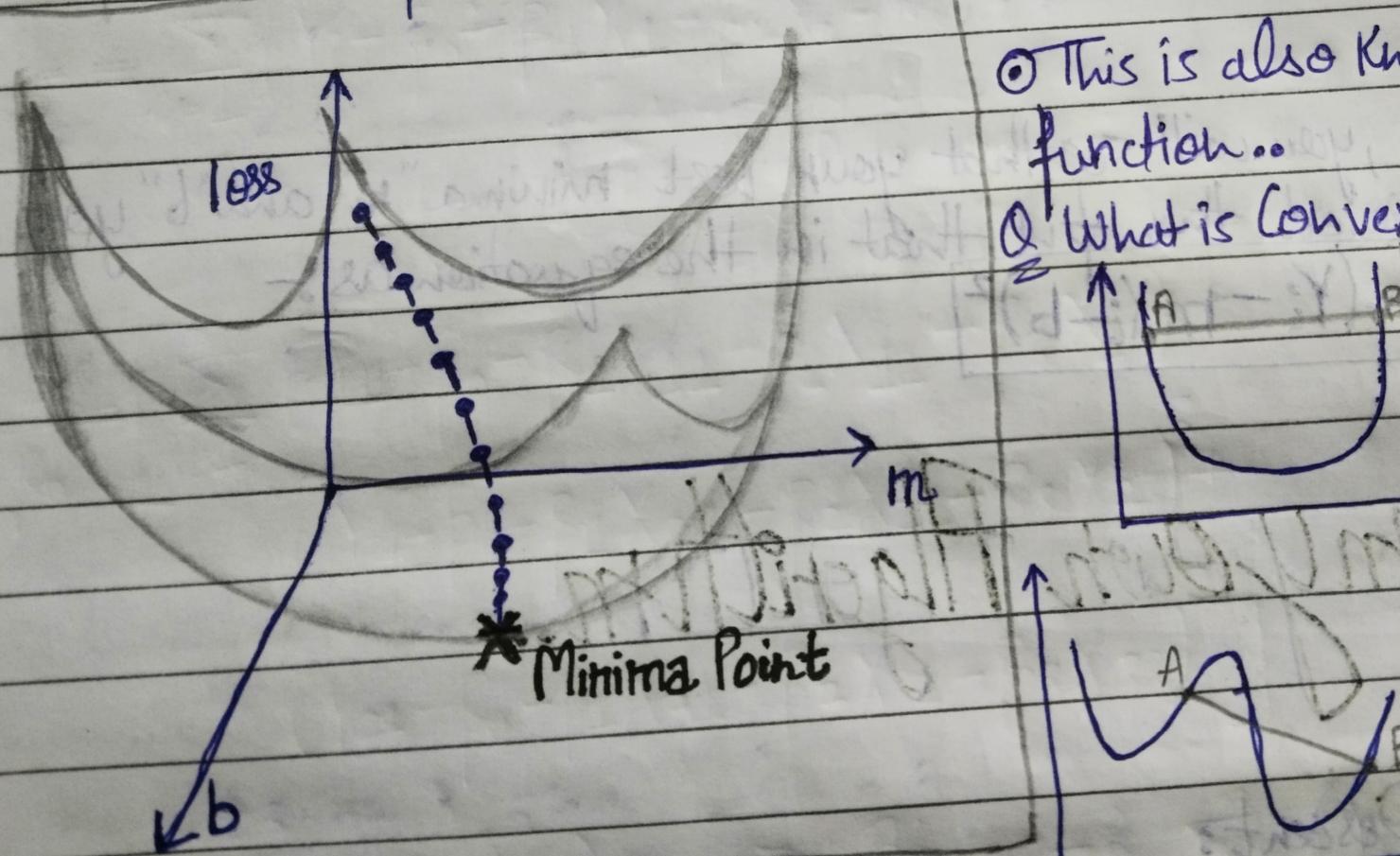
```
    print(self.m, self.b)
```

X	Y
cgpa	Package lpa
-	-
-	-
-	-
-	-
-	-

Data

Date.....

```
def predict(self, X_test):  
    return self.m * X_test + self.b
```



• This is also known as Convex function..

Q What is Convex function?

A Convex function is a function which have it cuts the function when we draw a line between 2 points.

This is a Non-Convex Function as this line cuts the function $f(x)$.