NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR

Cachar, Assam

B.Tech. IVth Sem

Subject Code: CS216

Subject Name: Applied Probability

Submitted By:

Name : Subhojit Ghimire

Sch. Id. : 1912160

Branch : CSE – B

1. **Write a R Program based on linear regression model on given data set:**

Height	151	174	130	140	150
Weight	63	82	48	58	60

X = height and Y = weight, where predicted weight of a person having height is 155
Note: height(x), weight(y), apply lm relation.

➔ **R code:**

 # Store heights in variable X

```
> X <- c (151, 174, 130, 140, 150)
```

 # Store weights in variable Y

```
> Y <- c (63, 82, 48, 58, 60)
```

 # Determine relationship model between the predictor Y and the response variable X using lm() function

```
> relation <- lm (Y~X)
```

 # Find the weight of the person having height 155 using predict() function

```
> predict_weight <- data.frame (X = 155)
> result <- predict (relation, predict_weight)
> print (result)
```

 # Visualise the linear regression graphically

```
> plot (X, Y, main = "Height and Weight Regression", abline(lm(X~Y)), cex = 1.3, pch = 16, xlab = "Height in cm", ylab = "Weight in kg")
```