**PRACTICAL NO.6**

**Perform the logistic regression on the given data warehouse data using R/Python.**

**Code:**

> a=mtcars[c("cyl","wt","am","gear")]

> d=head(a)

> d

cyl wt am gear

Mazda RX4 6 2.620 1 4

Mazda RX4 Wag 6 2.875 1 4

Datsun 710 4 2.320 1 4

Hornet 4 Drive 6 3.215 0 3

Hornet Sportabout 8 3.440 0 3

Valiant 6 3.460 0 3

> b<-glm(formula=am~cyl+wt,data=a,family=binomial)

> c<- summary(b)

> c

**Output:**

Call:

glm(formula = am ~ cyl + wt, family = binomial, data = a)

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 15.749 6.026 2.614 0.00896 \*\*

cyl 1.322 0.789 1.675 0.09390 .

wt -7.864 3.071 -2.561 0.01045 \*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 43.230 on 31 degrees of freedom

Residual deviance: 14.731 on 29 degrees of freedom

AIC: 20.731

Number of Fisher Scoring iterations: 7

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