**1.**

Text

Description automatically generated

Text

Description automatically generated

**2.**

Text

Description automatically generated

**Build decision tree model using C5.0 function:**

Text

Description automatically generated

Table

Description automatically generated

Prediction accuracy on training data using C5.0() function = (455+99)/666\*100% = **83.2%**

**3.**  Apply the model to the testing dataset:

Text

Description automatically generated

A picture containing table

Description automatically generated

Prediction accuracy on validation data using C5.0() function = (208+38)/334\*100% = **73.65%**

**Alternative (tree function)**

Text

Description automatically generated

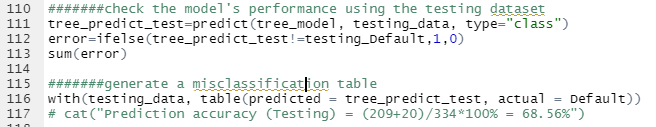
Text

Description automatically generated

Text

Description automatically generated with medium confidence

Prediction accuracy on training data using tree() function = (455+55)/666\*100% = **76.58%**

****

**Text

Description automatically generated**

Prediction accuracy on validation data using tree() function = (209+20)/334\*100% = **68.56%**