Topic 2 Exercise

1. Each female horseshoe crab has a male crab attached to her in her nest. There is a study investigated factors that affect whether the female crab had any other males, called satellites, residing near her.

Data fields:

crab: crab id

sat: number of satellites

y: had or had no satellites

weight: weight of the crab in kilogram

width: shell width in centimeter

color: crab color – 1, medium light; 2, medium; 3, medium dark; 4, dark

spine: spine condition – 1, both good; 2, one broker; 3, both broken

1. Read the text data file “Crabs.dat” into R. Describe the data.
2. Identify the factors that affect whether the female crab had any satellites residing near her (Using logistic regression).
3. Identify the factors that affect whether the number of satellites the female crab had residing near her (Using Poisson regression).