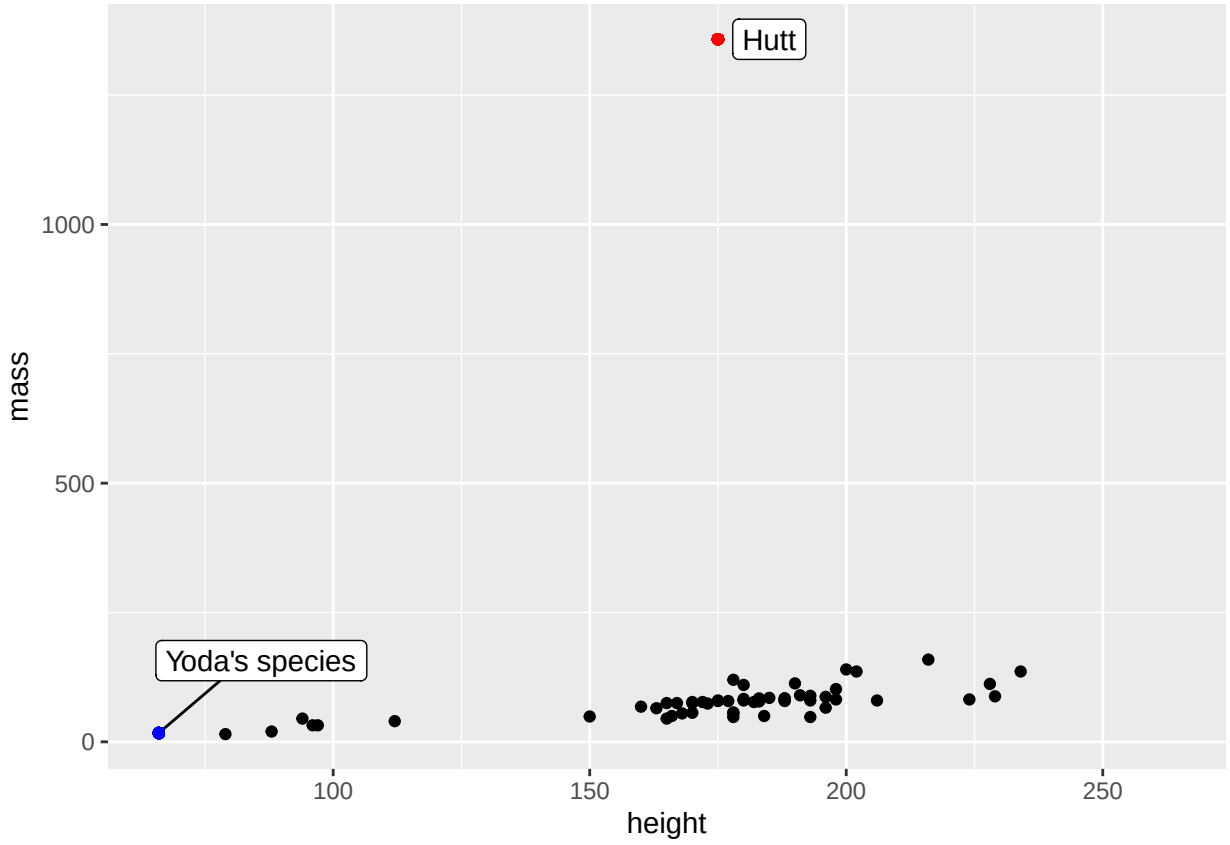
Internal Assessment 2

ECON03SEC1
Department of Economics
Presidency University, Kolkata
Full Marks: 40
21/01/2022

Group 1 (R)

Answer all of the following questions. $[4 \times 5 = 20]$

1. Using the `starwars` data in the `dplyr` package, replicate the following plot.



2. Which specie has the longest and widest petal in the `iris` dataset in the base R `datasets` packages?

3. Tidy and replicate the `airlines` dataset in the `nycflights13` package as given below.

```
## # A tibble: 16 x 2
##    carrier airline
##    <chr>   <chr>
##  1 9E      Endeavor
##  2 AA      American
##  3 AS      Alaska
##  4 B6      JetBlue
##  5 DL      Delta
##  6 EV      ExpressJet
##  7 F9      Frontier
##  8 FL      AirTran
##  9 HA      Hawaiian
## 10 MQ      Envoy
## 11 OO      SkyWest
## 12 UA      United
## 13 US      US
## 14 VX      Virgin
## 15 WN      Southwest
## 16 YV      Mesa
```

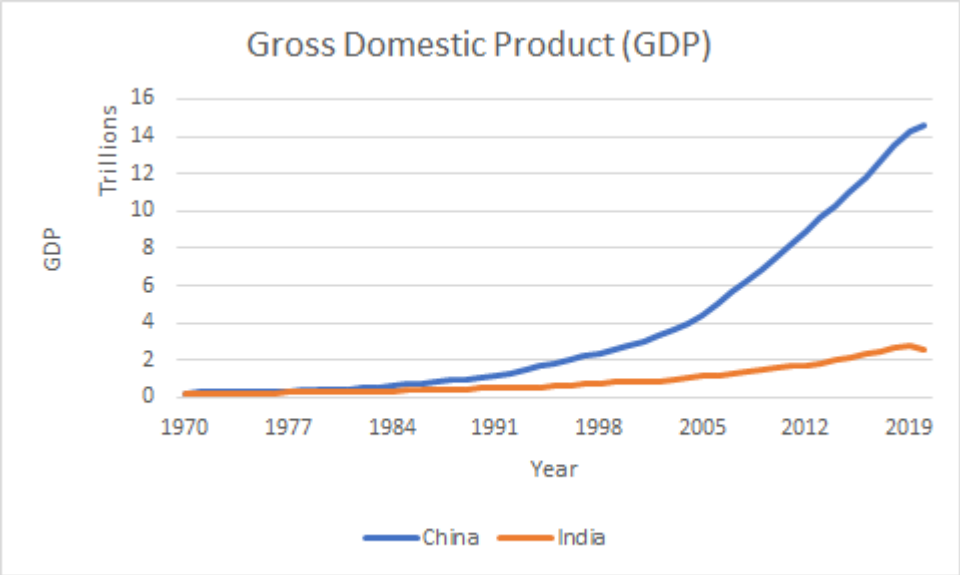
4. Write a code to print the following output.

```
## # A tibble: 2 x 2
##   `@gmail.com`  `:)`
##   <chr>        <dbl>
## 1 presi            0
## 2 econ             1
```

Group 2 (Excel)

Answer all of the following questions. $[4 \times 5 = 20]$

10. Using the `GDP.xlsx` data replicate the following plot.



2. What is the average displacement of a manual car with 4 cylinders in the `mtcars.xlsx` dataset?
3. Rank (without ties) the countries according to the Gross Domestic Product (GDP) in the `GDP.xlsx` dataset.
4. Suppose that the firm's production function is $Q = F(K, L) = 50K^{0.5}L^{0.5}$. Suppose, too, that the price of labour w=5 and the price of capital r=20. What is the cost minimising input bundle if the firm wants to produce 1,000 units per year?