Q5.R

mirrien

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```
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v ggplot2 3.3.5     v purrr   0.3.4
## v tibble  3.1.4     v dplyr   1.0.7
## v tidyr   1.1.3     v stringr 1.4.0
## v readr   2.0.1     v forcats 0.5.1

## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
poke = read.csv(file = "pokemon_2019.csv")
poke$Type_1=as.factor(poke$Type_1)

pokenew = poke[1,]
# pokenew = poke[1,]*NA

# names(pokenew)
pokenew$Number <- 722
pokenew$Name <- "Mirrien"
pokenew$Type_1 <- "Student"
pokenew$Type_2 <- "Poison"
pokenew$HP <- 500
pokenew$Attack <- 500
pokenew$Defense <- 500
pokenew$Sp_Atk <- 500
pokenew$Sp_Def <- 500
pokenew$Speed <- 500
pokenew$Total <- sum(pokenew[6:11])
pokenew$Generation <- 6
pokenew$isLegendary <- "True"
pokenew$Color <- "White"
pokenew$hasGender <- "True"
pokenew$Height_m <- 1.75
pokenew$Weight_kg <- 50
pokenew$hasMegaEvolution <- "True"
pokenew$Catch_Rate <- 0
pokenew$Body_Style <- "Dark_meat"
```

```
pokemonextra = rbind(pokenew, poke)

# plot(pokemonextra[,"Type_1"], las=2) # Error here but will work with some modifications

# is.data.frame(poke)
# is.data.frame(pokemonextra)
# is.numeric(poke[,"Type_1"])
# is.numeric(pokemonextra[,"Type_1"])
# is.factor(poke[,"Type_1"])
# is.factor(pokemonextra[,"Type_1"])
poke[1:5,"Type_1"]
```

```
## [1] Grass Grass Grass Fire  Fire
## 19 Levels:  Bug Dark Dragon Electric Fairy Fighting Fire Flying Ghost ... Water
```

```
pokemonextra[1:5,"Type_1"]
```

```
## [1] "Student" "Grass"   "Grass"   "Grass"   "Fire"
```

```
unique(poke[,"Type_1"])
```

```
##  [1] Grass    Fire     Water    Bug      Normal   Poison   Electric Ground
##  [9]          Fairy    Fighting Psychic  Rock     Ghost    Ice      Dragon
## [17] Dark     Steel    Flying
## 19 Levels:  Bug Dark Dragon Electric Fairy Fighting Fire Flying Ghost ... Water
```

```
pokemonextra[,"Type_1"] = factor(pokemonextra[,"Type_1"])
pokemonextra[1:5,"Type_1"]
```

```
## [1] Student Grass   Grass   Grass   Fire
## 20 Levels:  Bug Dark Dragon Electric Fairy Fighting Fire Flying Ghost ... Water
```

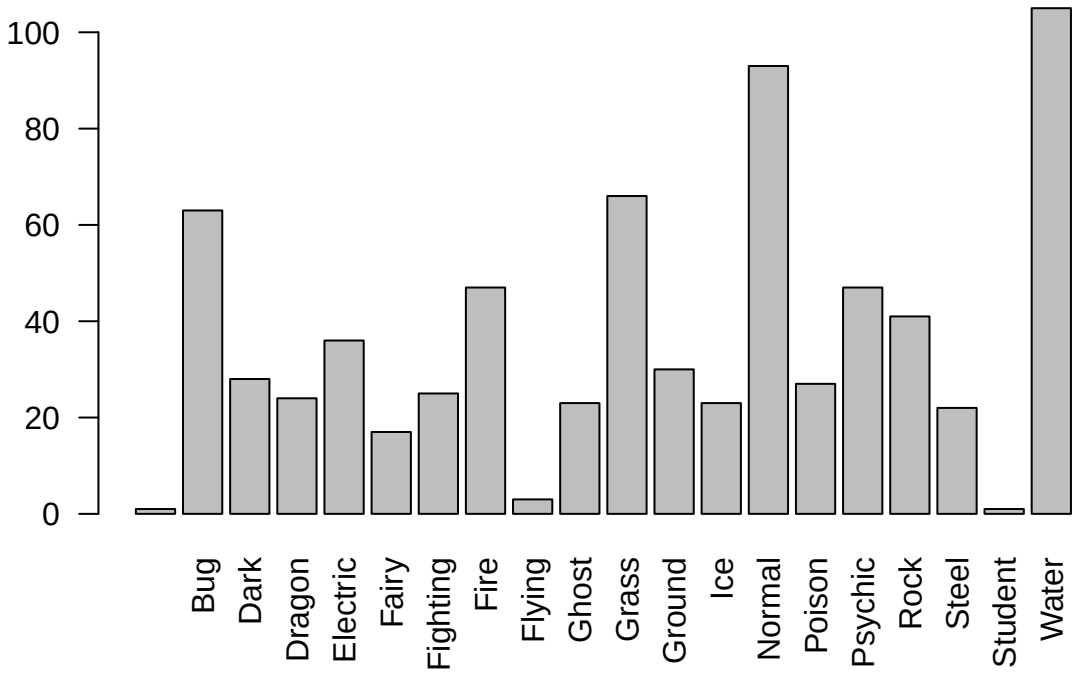
```
# as.numeric(poke[,"Type_1"])
# factor(poke[,"Attack"])
# you don't need to give the input argument 'levels' to factor
# but if you do it will give the levels nicer names.

levels(pokemonextra[,"Type_1"])
```

```
##  [1] ""         "Bug"      "Dark"     "Dragon"   "Electric" "Fairy"
##  [7] "Fighting" "Fire"     "Flying"   "Ghost"    "Grass"    "Ground"
## [13] "Ice"      "Normal"   "Poison"   "Psychic"  "Rock"     "Steel"
## [19] "Student"  "Water"
```

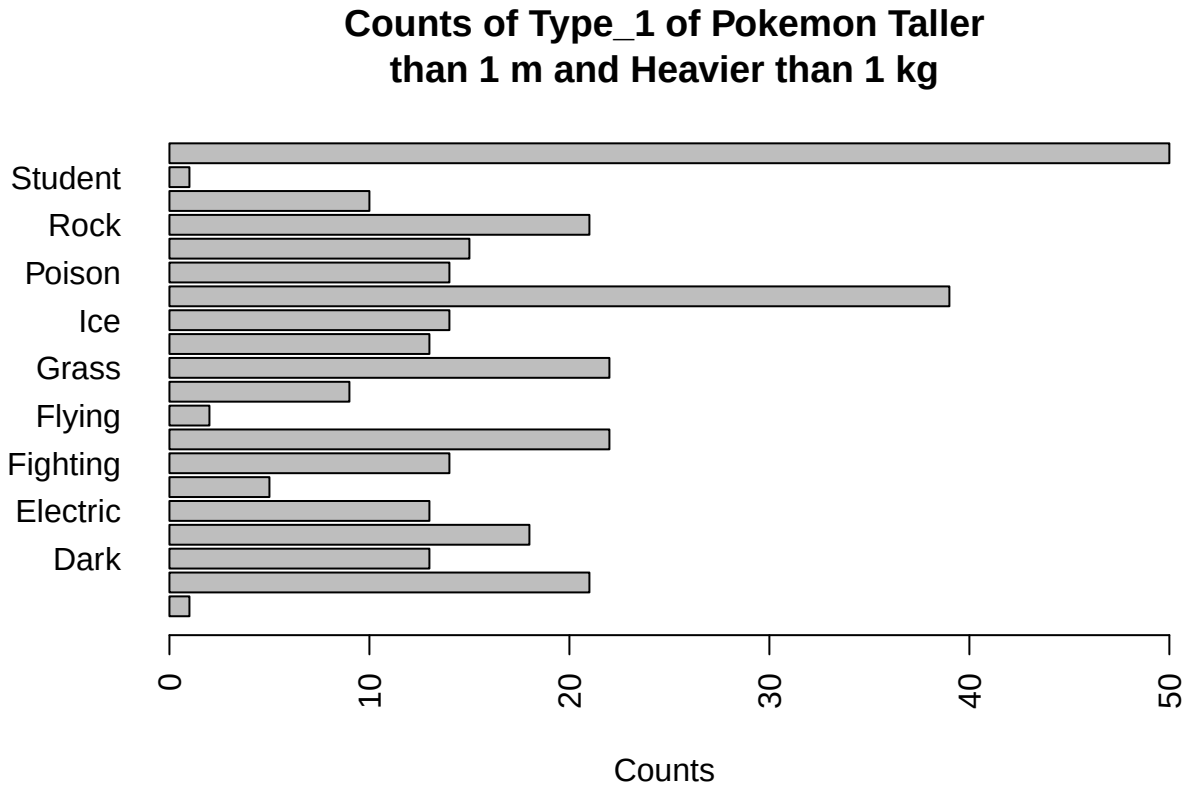
```
levels(poke[,"Type_1"])
```

```
##  [1] ""         "Bug"      "Dark"     "Dragon"   "Electric" "Fairy"
##  [7] "Fighting" "Fire"     "Flying"   "Ghost"    "Grass"    "Ground"
## [13] "Ice"      "Normal"   "Poison"   "Psychic"  "Rock"     "Steel"
## [19] "Water"
```

```r
plot(pokemonextra[,"Type_1"], las=2) # Now it should work
```




```r
##################################
# Q5a:
plot((filter(pokemonextra,(Height_m > 1)&(Weight_kg > 1)))[,"Type_1"],
     horiz = TRUE, # in the question, it requires a horizontal plot
                   # but the original "horizontal" plot on pg.7 is not
                   # horizontal. If it requires to remake what was given
                   # on pg.7, then delete "horiz" argument.
     las=2,
     main = "Counts of Type_1 of Pokemon Taller\nthan 1 m and Heavier than 1 kg",
     xlab="Counts")
```


Counts of Type_1 of Pokemon Taller than 1 m and Heavier than 1 kg
Student
Rock
Poison
Ice
Grass
Flying
Fighting
Electric
Dark
0
10
20
30
40
50
Counts

```
#
```