BACS HW2

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Question 1

a) create a normal distribution (`mean = 940, sd = 190`) and standardize it

```
mean <- 940
sd <- 190
rnorm <- rnorm(1000, mean = mean, sd = sd)
standardized_rnorm <- (rnorm - mean) / sd
```

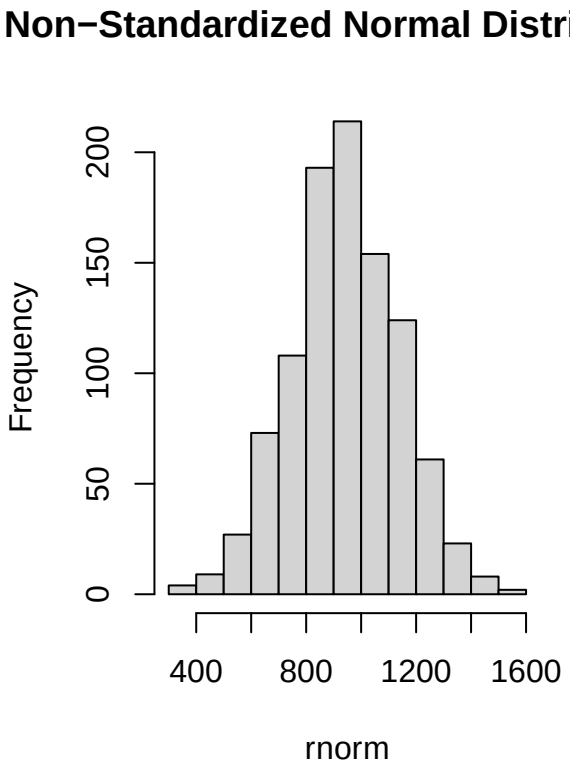
```
rnorm_mean <- mean(rnorm)
rnorm_std <- sd(rnorm)

standardized_rnorm_mean <- mean(standardized_rnorm)
standardized_rnorm_sd <- sd(standardized_rnorm)

glue("The mean of non-standardized normal distribution is {rnorm_mean}, and its standard deviation is {
```

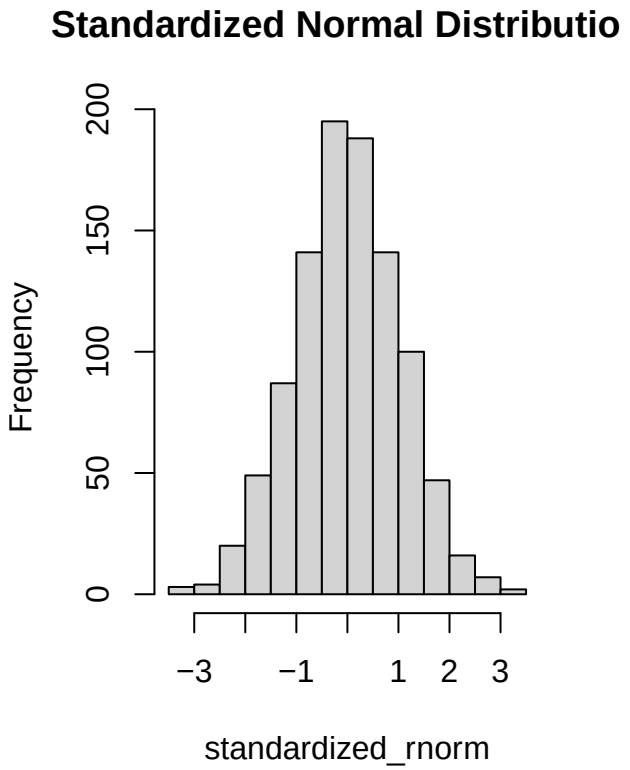
```
## The mean of non-standardized normal distribution is 941.395476991704, and its standard deviation is
```

```
glue("The mean of standardized normal distribution is {standardized_rnorm_mean}, and its standard devia
```

```
## The mean of standardized normal distribution is 0.00734461574580942, and its standard deviation is 1
```

```
par(mfrow=c(1,2))
hist(rnorm, main="Non-Standardized Normal Distribution")
hist(standardized_rnorm, main="Standardized Normal Distribution")
```





Question 2

Question 3