程式碼：

```
# 載入 hash 套件
library(hash)

# 讀取檔案
setwd("D:/TMU/三/DSA")
file_path <- "hw2_data.txt"
words <- readLines(file_path, warn = FALSE)

# 建立 hash table 來存放單字出現次數
word_count <- hash()

# 統計單字頻率
for (word in words) {
  if (has.key(word, word_count)) {
    word_count[[word]] <- word_count[[word]] + 1
  } else {
    word_count[[word]] <- 1
  }
}

# 計算不重複的英文字數
unique_word_count <- length(keys(word_count))

# 轉換 hash 為 data frame
word_freq <- data.frame(
  word = keys(word_count),
  frequency = values(word_count),
  stringsAsFactors = FALSE
)

# 依照出現次數排序
word_freq <- word_freq[order(-word_freq$frequency), ]

# 繪製直方圖
barplot(word_freq$frequency, names.arg = word_freq$word, las = 2, cex.names = 0.7, col =
"blue",
        main = "單字出現次數直方圖", xlab = "單字", ylab = "出現次數")
```

```
# 印出結果
cat("不重複的單字總數:", unique_word_count, "\n")
print(head(word_freq, 10))  # 顯示前 10 個單字
```

結果：

```
> # 印出結果
> cat("不重複的單字總數:", unique_word_count, "\n")
不重複的單字總數: 10
> print(head(word_freq, unique_word_count))
          word frequency
Cheese Cheese       234
Burger Burger       196
Coke     Coke       145
Pizza   Pizza        83
Fries   Fries        76
Taco     Taco        57
Steak   Steak        46
Rib       Rib        33
Pho       Pho        19
Potato Potato         3
```