

Quiz6

2024-02-12

```
library(ggplot2)

simulate_efficiency <- function(num_hours = 8, num_employees = 2, opening_hour = 9, closing_hour = 17) {
  hours <- seq(opening_hour, closing_hour)
  employees <- seq(1, num_employees)
  data <- list()

  for (hour in hours) {
    for (employee in employees) {
      # Simulate number of customers served as a random number between 3 and 10
      customers_served <- sample(3:10, 1)
      data <- c(data, list(c(employee, hour, customers_served)))
    }
  }

  df <- as.data.frame(do.call(rbind, data))
  colnames(df) <- c('employee_id', 'hour', 'customers_served')
  return(df)
}

# Simulate the data
simulated_data <- simulate_efficiency()

# Visualizing the simulated data
ggplot(simulated_data, aes(x = hour, y = customers_served, color = factor(employee_id))) +
  geom_point() +
  labs(x = "Hour", y = "Number of Customers Served", color = "Employee ID") +
  ggtitle("Efficiency of Employees") +
  theme_minimal()
```

