```
library(tidyverse)
library(haven)
library(dplyr)
library(stargazer)
library(carData)
library(broom)
library(ggplot2)
library(lubridate)
library(quantmod)


comps <- read_csv("/Users/ananya/Desktop/490 data.csv")

ggplot(comps, aes(x=event_type, y=aabret, fill=activity_type)) +
  geom_bar(stat="identity", position="dodge") +
  theme_minimal() +
  labs(title="Abnormal Returns by Event and Activity Type",
       x="Event Type", y="Abnormal Returns")

comps <- comps %>%
  mutate(return_sign = ifelse(aabret > 0, "Positive", "Negative"))

summary_table <- comps %>%
  group_by(event_type, activity_type, return_sign) %>%
  summarise(count = n(), .groups = 'drop')
print(summary_table)

comps <- comps %>%
  mutate(
    return_sign = ifelse(aabret > 0, "Positive", "Negative"),
    return_magnitude = case_when(
      abs(aabret) < 0.05 ~ "Small",
      abs(aabret) >= 0.05 & abs(aabret) < 0.1 ~ "Medium",
      abs(aabret) >= 0.1 ~ "Large"
    )
  )

detailed_summary_table <- comps %>%
  group_by(event_type, activity_type, return_sign, return_magnitude) %>%
  summarise(count = n(), .groups = 'drop')

average_returns <- comps %>%
  group_by(event_type, activity_type, return_sign) %>%
  summarise(average_aabret = mean(aabret, na.rm = TRUE), .groups = 'drop')

ggplot(average_returns, aes(x=activity_type, y=average_aabret,
fill=return_sign)) +
  geom_bar(stat="identity", position="dodge") +
  facet_wrap(~event_type, scales = "free_y") +
  theme_minimal() +
  labs(title="Average Abnormal Returns by Event and Activity Type",
       x="Activity Type",
       y="Average Abnormal Returns",
       fill="Return Sign")

comps <- comps %>%
  mutate(event_activity = as.factor(paste(event_type, activity_type,
sep="_"))) %>%
```

```
  mutate(event_activity = factor(event_activity, labels =
gsub("event_activity_", "", levels(event_activity))))

model <- lm(aabret ~ event_activity, data = comps)
summary(model)

model1 <- lm(aabret ~ event_activity + investments + ir + naics_code, data
= comps)
summary(model1)
```