**R SHINNY APP CODE**

# Read the data

dementia\_dataset <- read.csv("C:/Users/user/Downloads/data set - data set .csv")

# Define UI

ui <- fluidPage(

titlePanel("dementia\_dataset.csv"),

sidebarLayout(

sidebarPanel(

# Add any input controls if needed

),

mainPanel(

# Add output elements for plots or other visualizations

plotOutput("age\_distribution"),

plotOutput("age\_by\_mmse\_class"),

plotOutput("gds\_distribution"),

plotOutput("gds\_by\_mmse\_class"),

plotOutput("mna\_distribution"),

plotOutput("mna\_by\_mmse\_class"),

plotOutput("age\_by\_mmse\_class\_and\_gender")

)

)

)

# Define server

server <- function(input, output) {

# Distribution of Age

output$age\_distribution <- renderPlot({

ggplot(dementia\_dataset, aes(x = Age)) +

geom\_histogram(binwidth = 1, fill = "#69b3a2", color = "#e9ecef", alpha = 0.9) +

labs(title = "Distribution of Age")

})

# Boxplot of Age by MMSE Class

output$age\_by\_mmse\_class <- renderPlot({

ggplot(dementia\_dataset, aes(x = as.factor(MMSE\_class\_binary), y = Age)) +

geom\_boxplot(fill = "#69b3a2", color = "#e9ecef", alpha = 0.9) +

labs(x = "MMSE\_class\_binary", y = "Age", title = "Boxplot of Age by MMSE Class")

})

# Distribution of GDS (Geriatric Depression Scale) scores

output$gds\_distribution <- renderPlot({

ggplot(dementia\_dataset, aes(x = GDS)) +

geom\_histogram(binwidth = 1, fill = "#69b3a2", color = "#e9ecef", alpha = 0.9) +

labs(title = "Distribution of GDS Scores")

})

# Boxplot of GDS by MMSE Class

output$gds\_by\_mmse\_class <- renderPlot({

ggplot(dementia\_dataset, aes(x = as.factor(MMSE\_class\_binary), y = GDS)) +

geom\_boxplot(fill = "#69b3a2", color = "#e9ecef", alpha = 0.9) +

labs(x = "MMSE\_class\_binary", y = "GDS", title = "Boxplot of GDS Scores by MMSE Class")

})

# Distribution of MNA scores

output$mna\_distribution <- renderPlot({

ggplot(dementia\_dataset, aes(x = MNAa\_total + MNAb\_total)) +

geom\_histogram(binwidth = 1, fill = "#69b3a2", color = "#e9ecef", alpha = 0.9) +

labs(title = "Distribution of Total MNA Scores")

})

# Boxplot of Total MNA Scores by MMSE Class

output$mna\_by\_mmse\_class <- renderPlot({

ggplot(dementia\_dataset, aes(x = as.factor(MMSE\_class\_binary), y = MNAa\_total + MNAb\_total)) +

geom\_boxplot(fill = "#69b3a2", color = "#e9ecef", alpha = 0.9) +

labs(x = "MMSE\_class\_binary", y = "Total MNA Score", title = "Boxplot of Total MNA Scores by MMSE Class")

})

# Boxplot of Age by MMSE Class and Gender

output$age\_by\_mmse\_class\_and\_gender <- renderPlot({

ggplot(dementia\_dataset, aes(x = as.factor(MMSE\_class\_binary), y = Age, fill = as.factor(Gender))) +

geom\_boxplot(alpha = 0.7) +

labs(x = "MMSE\_class\_binary", y = "Age", fill = "Gender",

title = "Boxplot of Age by MMSE Class and Gender") +

scale\_fill\_discrete(name = "Gender", labels = c("Male", "Female"))

})

}

# Create Shiny app object

shiny\_app <- shinyApp(ui = ui, server = server)