```
> # Define variables
> robot_power_consumption_W <- 15.55
> power_bank_capacity_mAh <- 10000
> power_bank_voltage_V <- 3.7 + 3.7
> solar_cell_voltage_V <- 12
> solar_cell_current_mA <- 150
> solar_cells_count <- 3
> pile_capacity_mAh <- 2500
> pile_voltage_V <- 3.6
> piles_count <- 3
>
> # Calculate total energy consumption during robot work session
> total_energy_consumption_Wh <- robot_power_consumption_W * robot_work_hours
>
> # Calculate total energy capacity for each scenario
> energy_capacity_power_bank <- (power_bank_capacity_mAh * power_bank_voltage_V) / 1000
> energy_capacity_solar_piles <- (solar_cells_count * solar_cell_voltage_V * solar_cell_curren
t_mA * robot_work_hours) / 1000 +
+                                (piles_count * pile_capacity_mAh * pile_voltage_V) / 1000
>
> # Data for the grouped bar chart
> components <- c("Power Bank + Solar Cells", "Piles + Solar Cells")
> energy_capacity <- c(energy_capacity_power_bank, energy_capacity_solar_piles)
> df <- data.frame(Component = components, Energy_Capacity = energy_capacity)
>
> # Bar chart
> barplot(df$Energy_Capacity, names.arg = df$Component, col = c("blue", "orange"),
+         main = "Energy Capacity Comparison",
+         ylab = "Energy Capacity (Wh)", xlab = "Component",
+         border = "white", space = 0.3)
>
> # Add legend
> legend("topright", legend = df$Component, fill = c("blue", "orange"), title = "Components")
>
```