# A.S.A Lab Assignment 1

Name: Swanand Garge

Div : D(D2)

Roll no :42

SRN: 202201589

## Q. *To perform basic operation using R programming*

***a) R data types***

***b) R opearators***

***c) R looping Stmt***

```r
# R Data Types
num_value <- 10
char_value <- "Hello, R!"
logical_value <- TRUE
int_value <- as.integer(5)
complex_value <- 3 + 2i
factor_value <- factor(c("A", "B", "A", "C"))
date_value <- as.Date("2023-08-25")
vector_values <- c(1, 2, 3, 4, 5)
matrix_values <- matrix(1:9, nrow = 3)

# R Operators
```

```r
result_add <- num_value + int_value
result_compare <- num_value > int_value
result_concat <- paste(char_value, "Welcome!")

# R Looping Statements
cat("Using a for loop:\n")
for (i in 1:5) {
  cat("Iteration", i, "\n")
  print(vector_values[i])
}

cat("\nUsing a while loop:\n")
x <- 1
while (x <= 5) {
  cat("Value of x:", x, "\n")
  print(matrix_values[x])
  x <- x + 1
}
```

# Output:

```
Value of x: 1
[1] 1
Value of x: 2
[1] 2
Value of x: 3
[1] 3
Value of x: 4
[1] 4
Value of x: 5
[1] 5
```

| | |
|---|---|
| char_value | "Hello, R!" |
| complex_val… | 3+2i |
| date_value | 2023-08-25 UTC |
| factor_value | Factor w/ 3 levels "A","B","C":… |
| i | 5L |
| int_value | 5L |
| logical_val… | TRUE |
| mean_bs | 106.160621761658 |
| num_value | 10 |
| result_add | 15 |
| result_comp… | TRUE |
| result_conc… | "Hello, R! Welcome!" |
| sd_bs | 101.143102539313 |
| vector_valu… | num [1:5] 1 2 3 4 5 |
| x | 6 |