Assignment 2

1) Create a numerical vector to store the odd numbers between 1 to 100.

Ans -

```
Console ~/
> seq(1,100,2)
 [1]  1  3  5  7  9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41
[22] 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83
[43] 85 87 89 91 93 95 97 99
```

2) Create a numerical vector with following values - 1,2,3,4,5, 8,6,2,11 and create 3*3 matrix from vector.

Ans -

```
> c(1,2,3,4,5,8,6,2,11)
[1]  1  2  3  4  5  8  6  2 11
```

3*3 Matrix -

```
Console ~/
> B = matrix(c(1,2,3,4,5,8,6,2,11), nrow= 3, ncol= 3)
> B
     [,1] [,2] [,3]
[1,]    1    4    6
[2,]    2    5    2
[3,]    3    8   11
>
```

3) Consider following vector a <-c(NA,11:15 , NA, NA), remove all NA and find the mean of the vector.
Ans - We can do this in two ways.
i)
```
>
> a <-c(NA, 11:15, NA,NA)
> a
[1] NA 11 12 13 14 15 NA NA
> a <- a[!is.na(a)]
> a
[1] 11 12 13 14 15
> mean(a)
[1] 13
```

or
ii)
```
> a <- c(NA, 11:15, NA, NA)
> a
[1] NA 11 12 13 14 15 NA NA
> a <- na.omit(a)
> a
[1] 11 12 13 14 15
attr(,"na.action")
[1] 1 7 8
attr(,"class")
[1] "omit"
> mean(a)
[1] 13
```

With the help of na.omit function.

na.omit - This specific generic function is useful for dealing with NA. It returns the object with incomplete cases removed.

4) Consider the vector x=c("apple","banana","grape") Replace the first occurrence of a with '$'

Ans - Here I just replaced first occurrence of "a" with "$". I used str_replace here.

```
> x <- c ("apple","banana","grapes")
> x
[1] "apple"  "banana" "grapes"
> str_replace(x , "a", "$")
[1] "$pple"  "b$nana" "gr$pes"
```

While, here I replace all "a" with "$" from vector and I used gsub function here.

```
> x <- c("apple","banana","grapes")
> x
[1] "apple"  "banana" "grapes"
> gsub("a","$", x,ignore.case=FALSE)
[1] "$pple"  "b$n$n$" "gr$pes"
> |
```