Assumption

1. To generate Unique Id :
2. In unique ID , it should start with the name of Block.

Eg: “Barsathi”

1. Afterwards, it should contain the auditor number of the first auditor to the last auditor, with every village number assigned to first, second & to last auditors.
2. The auditor number and the village number should be separated by “\_” sign.

Eg: BLOCK NAME : “Barsathi”

Number of auditors required : 3

Number of Villages : 2

Unique Id 🡪 “Barsathi1\_1”

“Barsathi1\_2”

“Barsathi2\_1”

“Barsathi2\_2”

“Barsathi3\_1”

“Barsathi3\_3”

1. To get the data of villages of a specific block.

Eg: Block name🡪 “Barsathi”

Villages in Barsathi 🡪 “SOTIPUR“, “Khuaawan”, “Pauha” ,”Rampur Gohka”,”Khajuri”,“Sarawan”

1. To build data frame after getting the District name, Block name, Village names, ID.

Methodology

1. **Reading the data set:**

Steps:

1. Load the library “xlsx” for the file of this extension.

> library(xlsx)

2. Read the data set for Id ,for which we need to extract data from sheet no. 1 of excel file.

> q <- read.xlsx("Q1\_Avinash\_Village\_Data.xlsx",sheetIndex=1)

3.Read the data set for Villages from sheet no.3.

>r <- read.xlsx("Q1\_Avinash\_Village\_Data.xlsx",sheetIndex=3)

1. **Function to generate Id :**

Take 3 arguments 🡪 Block name(bn), villages(n), id(ni)

To make the function more simple just take row(i) as argument in the function and extract Block name(bn) , no. of villages(n) & no. of id(ni) from the data set by subsetting.

* To extract the block name of row=2

> b <- q[2,][1]

> bn <- b[1,]

> bn

[1] Barsathi

* To extract no. of village from row=2

> c <- q[2,][3]

> n <- c[1,]

> n

[1] 6

* To extract no. of Id from row=2 (no. of Id = No. of Villages \* No. of auditor req. in block)

> d <- q[2,][4]

> ni <- d[1,]

> ni

[1] 42

Now to generate Id in form of “badlapur1\_1” ,where :

a) 1st is the block name.

b) 2nd is the auditor number for set of village.

c) 3rd is the separator “\_”.

d) 4th is the number of the village.

**Function:**

uid <- function(i)

+ {

+ b <- q[i,][1]

+ bn <- b[1,]

+ c <- q[i,][3]

+ n <- c[1,]

+ d <- q[i,][4]

+ ni <- d[1,]

+ #Sequence for villages

+ id <- rep(1:n,times=n,each=1,len=ni)

+ #Sequence for auditors

+ village <- rep(1:100,times=n,each=n,len=ni)

+ x <- cbind(print(paste(bn,village,'\_',id)))

+ }

> uid(2)

[1] "Barsathi 1 \_ 1" "Barsathi 1 \_ 2" "Barsathi 1 \_ 3" "Barsathi 1 \_ 4" "Barsathi 1 \_ 5" "Barsathi 1 \_ 6" "Barsathi 2 \_ 1" "Barsathi 2 \_ 2"

[9] "Barsathi 2 \_ 3" "Barsathi 2 \_ 4" "Barsathi 2 \_ 5" "Barsathi 2 \_ 6" "Barsathi 3 \_ 1" "Barsathi 3 \_ 2" "Barsathi 3 \_ 3" "Barsathi 3 \_ 4"

[17] "Barsathi 3 \_ 5" "Barsathi 3 \_ 6" "Barsathi 4 \_ 1" "Barsathi 4 \_ 2" "Barsathi 4 \_ 3" "Barsathi 4 \_ 4" "Barsathi 4 \_ 5" "Barsathi 4 \_ 6"

[25] "Barsathi 5 \_ 1" "Barsathi 5 \_ 2" "Barsathi 5 \_ 3" "Barsathi 5 \_ 4" "Barsathi 5 \_ 5" "Barsathi 5 \_ 6" "Barsathi 6 \_ 1" "Barsathi 6 \_ 2"

[33] "Barsathi 6 \_ 3" "Barsathi 6 \_ 4" "Barsathi 6 \_ 5" "Barsathi 6 \_ 6" "Barsathi 7 \_ 1" "Barsathi 7 \_ 2" "Barsathi 7 \_ 3" "Barsathi 7 \_ 4"

[41] "Barsathi 7 \_ 5" "Barsathi 7 \_ 6"

>data4 <- uid(2)

1. **To generate Sequence of Villages, Block & District**

**#Read the data set from sheet=3**

> r <- read.xlsx("Q1\_Avinash\_Village\_Data.xlsx",sheetIndex=3)

> head(r)

S.NO District Block Village

1 1 Jaunpur Dharampur Bihrojpur

2 2 Jaunpur Dharampur Chauki Pilkhuwan

3 3 Jaunpur Dharampur Chorsand

4 4 Jaunpur Sikrara Moinuddinpur

5 5 Jaunpur Mariahu Auraila

6 6 Jaunpur Sirkoni kuddupur

**#To get the data of villages from the Block name**

> x <- r$Village[r$Block =='Barsathi']

> x

[1] SOTIPUR Khuaawan Pauha Rampur Gohka Khajuri Sarawan <NA>

1050 Levels: Aadmpur ABBOPUR Abdullahpur Abhaipur Abhay Chand Patti Adampur Adampur Akabar Ahamadpur AHAMADPUR Ahirauli ... ZASOPUR

**#To remove NA from the list**

> b <- is.na(x)

> b

[1] FALSE FALSE FALSE FALSE FALSE FALSE TRUE

> y <- x[!b]

> y

[1] SOTIPUR Khuaawan Pauha Rampur Gohka Khajuri Sarawan

1050 Levels: Aadmpur ABBOPUR Abdullahpur Abhaipur Abhay Chand Patti Adampur Adampur Akabar Ahamadpur AHAMADPUR Ahirauli ... ZASOPUR

#**Sequence for Villages**

> data1 <- rep(y,each=1,len=42)

> data1

[1] SOTIPUR Khuaawan Pauha Rampur Gohka Khajuri Sarawan SOTIPUR Khuaawan Pauha Rampur Gohka

[11] Khajuri Sarawan SOTIPUR Khuaawan Pauha Rampur Gohka Khajuri Sarawan SOTIPUR Khuaawan

[21] Pauha Rampur Gohka Khajuri Sarawan SOTIPUR Khuaawan Pauha Rampur Gohka Khajuri Sarawan

[31] SOTIPUR Khuaawan Pauha Rampur Gohka Khajuri Sarawan SOTIPUR Khuaawan Pauha Rampur Gohka

[41] Khajuri Sarawan

1050 Levels: Aadmpur ABBOPUR Abdullahpur Abhaipur Abhay Chand Patti Adampur Adampur Akabar Ahamadpur AHAMADPUR Ahirauli ... ZASOPUR

#**Sequence for Block**

> data2 <- rep("Barsathi",each=1,len=42)

> data2

[1] "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi"

[13] "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi"

[25] "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi"

[37] "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi" "Barsathi"

#**Sequence for District**

> data3 <- rep("Jaunpur",each=1,len=42)

> data3

[1] "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur"

[15] "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur"

[29] "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur" "Jaunpur"

**4) Tabulate all the data:**

> d1<- data.frame(District <- data3 ,Block <- data2 , Village <- data1 ,id <- data4)

> colnames(d1) <- c("District","Block","Village","id")

**5) Save the data in excel file**

> write.xlsx(d1,"E:/data.xlsx")

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Result | District | Block | Village | id |
| 1 | Jaunpur | Barsathi | SOTIPUR | Barsathi 1 \_ 1 |
| 2 | Jaunpur | Barsathi | Khuaawan | Barsathi 1 \_ 2 |
| 3 | Jaunpur | Barsathi | Pauha | Barsathi 1 \_ 3 |
| 4 | Jaunpur | Barsathi | Rampur Gohka | Barsathi 1 \_ 4 |
| 5 | Jaunpur | Barsathi | Khajuri | Barsathi 1 \_ 5 |
| 6 | Jaunpur | Barsathi | Sarawan | Barsathi 1 \_ 6 |
| 7 | Jaunpur | Barsathi | SOTIPUR | Barsathi 2 \_ 1 |
| 8 | Jaunpur | Barsathi | Khuaawan | Barsathi 2 \_ 2 |
| 9 | Jaunpur | Barsathi | Pauha | Barsathi 2 \_ 3 |
| 10 | Jaunpur | Barsathi | Rampur Gohka | Barsathi 2 \_ 4 |
| 11 | Jaunpur | Barsathi | Khajuri | Barsathi 2 \_ 5 |
| 12 | Jaunpur | Barsathi | Sarawan | Barsathi 2 \_ 6 |
| 13 | Jaunpur | Barsathi | SOTIPUR | Barsathi 3 \_ 1 |
| 14 | Jaunpur | Barsathi | Khuaawan | Barsathi 3 \_ 2 |
| 15 | Jaunpur | Barsathi | Pauha | Barsathi 3 \_ 3 |
| 16 | Jaunpur | Barsathi | Rampur Gohka | Barsathi 3 \_ 4 |
| 17 | Jaunpur | Barsathi | Khajuri | Barsathi 3 \_ 5 |
| 18 | Jaunpur | Barsathi | Sarawan | Barsathi 3 \_ 6 |
| 19 | Jaunpur | Barsathi | SOTIPUR | Barsathi 4 \_ 1 |
| 20 | Jaunpur | Barsathi | Khuaawan | Barsathi 4 \_ 2 |
| 21 | Jaunpur | Barsathi | Pauha | Barsathi 4 \_ 3 |
| 22 | Jaunpur | Barsathi | Rampur Gohka | Barsathi 4 \_ 4 |
| 23 | Jaunpur | Barsathi | Khajuri | Barsathi 4 \_ 5 |
| 24 | Jaunpur | Barsathi | Sarawan | Barsathi 4 \_ 6 |
| 25 | Jaunpur | Barsathi | SOTIPUR | Barsathi 5 \_ 1 |
| 26 | Jaunpur | Barsathi | Khuaawan | Barsathi 5 \_ 2 |
| 27 | Jaunpur | Barsathi | Pauha | Barsathi 5 \_ 3 |
| 28 | Jaunpur | Barsathi | Rampur Gohka | Barsathi 5 \_ 4 |
| 29 | Jaunpur | Barsathi | Khajuri | Barsathi 5 \_ 5 |
| 30 | Jaunpur | Barsathi | Sarawan | Barsathi 5 \_ 6 |
| 31 | Jaunpur | Barsathi | SOTIPUR | Barsathi 6 \_ 1 |
| 32 | Jaunpur | Barsathi | Khuaawan | Barsathi 6 \_ 2 |
| 33 | Jaunpur | Barsathi | Pauha | Barsathi 6 \_ 3 |
| 34 | Jaunpur | Barsathi | Rampur Gohka | Barsathi 6 \_ 4 |
| 35 | Jaunpur | Barsathi | Khajuri | Barsathi 6 \_ 5 |
| 36 | Jaunpur | Barsathi | Sarawan | Barsathi 6 \_ 6 |
| 37 | Jaunpur | Barsathi | SOTIPUR | Barsathi 7 \_ 1 |
| 38 | Jaunpur | Barsathi | Khuaawan | Barsathi 7 \_ 2 |
| 39 | Jaunpur | Barsathi | Pauha | Barsathi 7 \_ 3 |
| 40 | Jaunpur | Barsathi | Rampur Gohka | Barsathi 7 \_ 4 |
| 41 | Jaunpur | Barsathi | Khajuri | Barsathi 7 \_ 5 |
| 42 | Jaunpur | Barsathi | Sarawan | Barsathi 7 \_ 6 |