**Exercise: Basics of R**

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| **Sr No** | **Task** |
| 1 | Add 3 to 7, multiply 4 and 8,  > 3+7  [1] 10  > 4\*8  [1] 32 |
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| 2 | Test logical statements 12 > 18 and 12+18 = 40  > 12>18  [1] FALSE  > 12+18 == 40  [1] FALSE |
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| 3 | Type **I HAVE LEARNT R** 3 times  > rep("I HAVE LEARNT R", times = 3)  [1] "I HAVE LEARNT R" "I HAVE LEARNT R" "I HAVE LEARNT R" |
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| 4 | Create a vector name **dear** having 3 items **Bangalore, Kolkata, Mumbai**  > dear<-c('Bangalore', 'Kolkata', 'Mumbai')  > dear  [1] "Bangalore" "Kolkata" "Mumbai" |
| 5 | Create a vector name **dearer** having 3 items **84, 65, 39** |
|  | > dearer<-c(84,65,39)  > dearer  [1] 84 65 39 |
| 6 | Create a vector name **dearest** having numbers from **101** to **107**  > dearest<-101:107  > dearest  [1] 101 102 103 104 105 106 107 |
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| 7 | Access the third item in vector **dear**  > dear[3]  [1] "Mumbai" |
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| 8 | Add new city, **Chennai** at 4th place in vector **dear**  > dear[4]<-"Chennai"  > dear  [1] "Bangalore" "Kolkata" "Mumbai" "Chennai" |
| 9 | Access 2nd & 4th item in vector **dear**  > dear[c(2,4)]  [1] "Kolkata" "Chennai" |
| 10 | Create a vector name **d** having numbers 4, 5, 6 and another vector **h** having numbers 2, 3, 4. Multiply vector **d** with **h**.  > d<-c(4,5,6)  > d  [1] 4 5 6  > h<-c(2,3,4)  > h  [1] 2 3 4  > d\*h  [1] 8 15 24 |
| 11 | Check numbers **84, 65, 38** in vector **dearer**  > dearer == c(84,65,38)  [1] TRUE TRUE FALSE |
| 12 | Sum the values given in vector **k**, 3, 8, NA, 9  > k<-c(3,8,NA,9)  > k  [1] 3 8 NA 9  > help(sum)  > sum(k, na.rm = TRUE)  [1] 20 |
| 13 | Create a matrix of order 2 by 2 having all numbers as 1  > matrix(1,2,2)  [,1] [,2]  [1,] 1 1  [2,] 1 1 |
| 14 | Say a vector **w** is having numbers 1, 2, 3, 4, 5, 6. Create a 2 by 3 matrix using this vector **w**  > w<-c(1,2,3,4,5,6)  > w  [1] 1 2 3 4 5 6  > matrix(w,2,3)  [,1] [,2] [,3]  [1,] 1 3 5  [2,] 2 4 6 |
| 15 | Say a vector **q** is having numbers from 1 to 6. Create a matrix of the order 2 by 3  > q<-c(1:6)  > q  [1] 1 2 3 4 5 6  > matrix(q,2,3)  [,1] [,2] [,3]  [1,] 1 3 5  [2,] 2 4 6 |
| 16 | Say names of students are stored in vector **names** (names were Alberic, John, Steve, Chris). Their midterm marks are stored in vector **midterm** (87, 89, 93, 95 respectively). Their final marks are stored in vector **final** (92, 94, 95, 98 respectively). Create a data frame name **result** keeping all three vectors in it.  > chests<-c('Alberic', 'JOhn', 'Steve', 'Chris')  > names<-factor(chests)  > print(names)  [1] Alberic JOhn Steve Chris  Levels: Alberic Chris JOhn Steve  > midterm<-c(87,89,93,95)  > midterm  [1] 87 89 93 95  > final<-c(92,94,95,98)  > final  [1] 92 94 95 98 |
| 17 | > results<-data.frame(names, midterm, final)  > print(results)  names midterm final  1 Alberic 87 92  2 JOhn 89 94  3 Steve 93 95  4 Chris 95 98  Access second column (i) by the number of column (ii) by name of the column (iii) by $ sign  > results[[2]]  [1] 87 89 93 95  > results[["midterm"]]  [1] 87 89 93 95  > results$midterm  [1] 87 89 93 95 |
| 18 | Two csv files are given to you in the folder name (i) **merge1** (ii) **merge2**. Import files in R  > merge1 <- read.csv("D:/ACADGILD/merge1.csv")  > View(merge1)  > merge2 <- read.csv("D:/ACADGILD/merge2.csv")  > View(merge2) |
| 19 | Merge files merge1 and merge2 and give name **tests**  > merge(x=merge1, y=merge2)  firstname gpa quiz1 final  1 ALFRED 1.18 6 53  2 ANN 3.98 7 68  3 JACKIE 2.46 10 57  4 SCOTT 2.19 10 54  5 VALERIE 1.84 7 66  > tests<-merge(x=merge1, y=merge2)  > tests  firstname gpa quiz1 final  1 ALFRED 1.18 6 53  2 ANN 3.98 7 68  3 JACKIE 2.46 10 57  4 SCOTT 2.19 10 54  5 VALERIE 1.84 7 66 |
| 20 | Save the merged data set **tests** at your desktop  write.csv(tests, "C:/Users/Manish Chugh/Desktop/tests.csv") |
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RHistory file location as defined on console

> savehistory("C:/Users/Manish Chugh/Desktop/Exercise\_Manish.Rhistory")