# Lab\_05

## NETID

Use only commands & functions that are shown in the indicated chapter or prior chapters.

### Problem #01 - Chapter 22 Exercise #03

```
# Show your work here

for(index in 1:40){
   if(index==1){
      my_list<--4
      next
   }
   if(index==2){
      my_list<-c(my_list,3)
      next
   }
   nextel<-my_list[index-1]+my_list[index-2]
   my_list<-c(my_list,nextel)
}
my_list</pre>
```

```
3
                                                                                 7
##
    [1]
              -4
                                 -1
                                           2
                                                     1
                                                               3
                                                                        4
##
   [9]
                                 29
                                           47
                                                    76
                                                             123
                                                                      199
                                                                               322
              11
                        18
                                                                     9349
## [17]
             521
                       843
                               1364
                                        2207
                                                  3571
                                                           5778
                                                                             15127
## [25]
                                                167761
                                                                            710647
           24476
                     39603
                              64079
                                       103682
                                                         271443
                                                                   439204
## [33]
         1149851
                  1860498
                            3010349
                                     4870847
                                               7881196 12752043 20633239 33385282
```

Problem #02 - Chapter 23 Exercise #10 ( Your result should be a logical vector of length two. The first value for "A". The second for "B".)

```
# Show your work here
check<-c('A' %in% Set001,'B' %in% Set001)
check</pre>
```

## [1] FALSE FALSE

## Problem #03 - Chapter 24 Exercise #02

```
# Show your work here
sum(Math002,na.rm = TRUE)
```

## [1] 24

#### Problem #04 - Chapter 24 Exercise #04

```
# Show your work here
end<-length(Math002)
for(index in 1:end){
  number2<-sum(Math002[1:index],na.rm = TRUE)
  if (index==1){
    listn<-number2
    next
  }
  listn<-c(listn,number2)
}</pre>
```

```
##
       [1]
             -3
                   -3
                         -8
                               -3
                                      2
                                          -2
                                                -2
                                                      -7
                                                            -2
                                                                  -5
                                                                       -1
                                                                             -1
                                                                                   -2
                                                                                          2
##
      [15]
              2
                    2
                         -2
                               -1
                                     -4
                                          -5
                                                -3
                                                       0
                                                             3
                                                                   7
                                                                         6
                                                                              3
                                                                                   -1
                                                                                          3
                                7
                                                       2
                                                            -2
                                                                  -7
##
     [29]
              4
                          4
                                      4
                                           2
                                                 2
                                                                            -14
                                                                                   -9
                                                                                         -4
                   -1
                                                                       -9
             -2
                         -5
                               -9
                                                            -4
                                                                  -9
##
      [43]
                   -5
                                     -6
                                          -4
                                                -1
                                                      -4
                                                                       -8
                                                                             -8
                                                                                  -10
                                                                                        -15
##
      [57]
            -15
                  -16
                              -16
                                    -19
                                         -20
                                               -17
                                                     -21
                                                           -20
                                                                 -24
                                                                      -24
                                                                            -25
                                                                                  -29
                                                                                        -29
                        -12
##
     [71]
            -29
                  -34
                        -31
                              -34
                                    -33
                                         -37
                                               -34
                                                     -33
                                                           -38
                                                                 -39
                                                                      -40
                                                                            -44
                                                                                  -40
                                                                                       -40
            -39
                  -41
                        -37
                              -41
                                    -42
                                         -44
                                               -46
                                                     -44
                                                           -41
                                                                 -44
                                                                      -45
                                                                            -40
                                                                                  -38
                                                                                       -40
##
      [85]
##
     [99]
            -41
                  -46
                        -51
                              -53
                                    -52
                                         -56
                                               -58
                                                     -60
                                                           -59
                                                                 -60
                                                                      -59
                                                                            -56
                                                                                  -52
                                                                                       -56
##
    [113]
            -51
                  -54
                        -58
                              -53
                                    -58
                                         -63
                                               -58
                                                     -53
                                                           -53
                                                                -50
                                                                      -50
                                                                            -51
                                                                                  -51
                                                                                        -55
                  -54
                                                          -60
##
    [127]
            -51
                        -57
                              -62
                                    -59
                                         -58
                                               -60
                                                     -56
                                                                -59
                                                                      -61
                                                                            -58
                                                                                  -53
                                                                                       -55
##
    [141]
            -51
                  -52
                        -47
                              -52
                                    -47
                                         -48
                                               -51
                                                     -51
                                                           -50
                                                                -45
                                                                      -45
                                                                            -46
                                                                                  -48
                                                                                       -49
##
    [155]
            -49
                  -46
                        -46
                              -46
                                    -46
                                         -41
                                               -38
                                                     -35
                                                           -40
                                                                 -36
                                                                      -36
                                                                            -36
                                                                                  -35
                                                                                       -35
##
    [169]
            -35
                  -40
                        -39
                              -40
                                    -43
                                         -41
                                               -43
                                                     -42
                                                           -38
                                                                 -43
                                                                      -40
                                                                            -43
                                                                                  -46
                                                                                       -50
    [183]
            -53
                  -49
                        -46
                              -49
                                    -52
                                         -50
                                               -52
                                                     -48
                                                           -48
                                                                -51
                                                                      -47
                                                                            -49
                                                                                  -49
                                                                                       -45
##
##
    [197]
            -48
                  -48
                        -48
                              -52
                                    -54
                                         -50
                                               -45
                                                     -50
                                                           -55
                                                                -50
                                                                      -53
                                                                            -50
                                                                                  -45
                                                                                       -43
                  -45
                        -41
                                               -41
    [211]
            -43
                                   -41
                                         -41
                                                     -43
                                                           -46
                                                                -45
                                                                      -48
                                                                            -53
                                                                                  -56
                                                                                       -56
##
                              -45
    [225]
            -53
                  -53
                        -58
                              -56
                                   -57
                                               -64
                                                     -60
                                                           -62
                                                                -66
##
                                         -60
                                                                      -61
                                                                            -60
                                                                                  -61
                                                                                       -65
##
    [239]
            -70
                  -71
                        -66
                              -69
                                   -64
                                         -64
                                               -64
                                                     -64
                                                           -64
                                                                -62
                                                                      -59
                                                                            -61
                                                                                  -62
                                                                                       -62
    [253]
            -59
                  -61
                        -59
                              -59
                                    -58
                                               -61
                                                     -61
                                                           -59
                                                                 -54
                                                                      -50
                                                                            -55
                                                                                  -54
##
                                         -61
                                                                                       -58
    [267]
            -59
                                    -70
                                               -71
                                                     -75
                                                                 -80
                                                                      -82
##
                  -62
                        -63
                              -65
                                         -67
                                                           -80
                                                                            -85
                                                                                  -88
                                                                                       -84
##
    [281]
            -80
                  -78
                        -80
                              -80
                                    -80
                                         -82
                                               -84
                                                     -83
                                                           -81
                                                                 -83
                                                                      -82
                                                                            -77
                                                                                  -79
                                                                                       -82
                                    -82
                                               -85
                                                     -86
                                                                -93
                                                                      -93
                                                                            -93
                                                                                       -94
##
    [295]
            -87
                  -84
                        -80
                              -83
                                         -85
                                                           -88
                                                                                  -98
##
    [309]
            -95
                  -92
                        -91
                              -86
                                   -82
                                         -86
                                               -83
                                                     -82
                                                           -80
                                                                -80
                                                                      -84
                                                                            -88
                                                                                  -93
    [323]
##
            -92
                  -97 -101
                              -98 -102
                                         -99
                                              -103
                                                   -106 -101 -102 -107 -112 -111 -109
##
    [337] -104 -108 -103 -102
                                   -99
                                         -99
                                               -99
                                                     -97 -101
                                                                -97
                                                                      -97
                                                                            -98 -103 -103
##
    [351] -103
                 -99
                        -96 -100 -100 -102
                                               -97 -101 -106 -107 -111 -113 -117 -118
##
    [365] -117 -120 -121 -126 -130 -130 -135 -138 -142 -140 -141 -140 -140 -138
##
    [379] -140 -138 -133 -133 -132 -135 -135 -140 -145 -146 -148 -148 -146 -144
    [393] -146 -146 -151 -151 -148 -153 -156 -159 -154 -154 -155 -155 -160 -160
##
##
    [407] -164 -169 -171 -171 -170 -175 -170 -166 -166 -161 -164 -161 -160 -164
##
    [421] -165 -165 -165 -160 -164 -168 -163 -163 -159 -164 -161 -159 -159 -159
    [435] -154 -158 -163 -159 -158 -159 -162 -162 -162 -160 -165 -163 -158 -157
##
    [449] -160 -155 -154 -159 -161 -157 -160 -159 -158 -156 -155 -160 -162 -157
##
    [463] -162 -167 -168 -164 -168 -166 -164 -160 -158 -154 -155 -155 -151 -148
##
##
    [477] -152 -157 -153 -153 -151 -146 -143 -145 -144 -139 -143 -146 -150 -150
    [491] -150 -152 -155 -154 -155 -150 -145 -148 -149 -154 -151 -152 -155 -151
##
##
    [505] -156 -156 -153 -157 -162 -163 -161 -156 -159 -159 -157 -159 -156 -153
    [519] -153 -150 -146 -146 -149 -153 -152 -157 -157 -153 -156 -151 -152 -153
     \begin{bmatrix} 533 \end{bmatrix} \ \ -148 \ \ -147 \ \ -145 \ \ -142 \ \ -146 \ \ -147 \ \ -148 \ \ -153 \ \ -150 \ \ -153 \ \ -148 \ \ -147 \ \ -143 \ \ -142 
##
```

```
[547] -141 -145 -147 -147 -144 -147 -148 -151 -151 -156 -153 -149 -149 -152
##
    [561] -147 -147 -147 -149 -146 -147 -147 -142 -143 -140 -145 -145 -140 -137
##
    [575] -137 -132 -128 -123 -125 -129 -133 -133 -133 -133 -129 -125 -123 -122
    [589] -122 -127 -123 -121 -119 -123 -120 -116 -116 -112 -109 -109 -112 -108
##
##
    [603] -112 -115 -119 -117 -112 -110 -107 -109 -105 -101
                                                                  -96
                                                                        -92
                                                                              -92
                                                                                   -90
    [617] -94 -99 -101 -101 -104 -105 -102 -103 -102 -97
                                                                  -99
                                                                        -99
                                                                              -98
                                                                                   -98
##
##
    [631] -102 -99 -99 -101 -106 -110 -115 -115 -112 -115 -110 -109 -109 -109
                                 -98 -98 -99
                                                       -99
                                                             -97 -94 -96
##
    [645] -105 -105 -101 -102
                                                 -96
                                                                             -96
##
    [659]
           -96
                -93
                      -94
                            -94
                                 -94
                                       -96
                                            -99
                                                  -97
                                                       -98
                                                             -98 -101 -106 -106 -108
    [673] -104 -104 -102
                            -98 -102 -101 -103 -105 -104 -109 -105 -107 -106 -103
##
    [687]
            -99
                 -97
                       -97 -102 -100
                                       -96
                                             -96
                                                  -97
                                                        -95 -100 -102
                                                                        -98
                                                                              -98 -101
    [701]
            -97
                 -99 -103 -100
                                 -99
                                       -94
                                                             -85
                                                                        -82
                                                                              -77
                                                                                   -75
##
                                             -89
                                                  -87
                                                        -84
                                                                   -82
##
    [715]
            -76
                 -76
                       -79
                            -80
                                 -78
                                       -77
                                             -77
                                                  -79
                                                        -80
                                                             -78
                                                                   -76
                                                                        -71
                                                                              -74
                                                                                   -78
                       -79
                                  -79
                                       -78
                                                                   -76
                                                                        -72
                                                                              -70
##
    [729]
            -82
                 -82
                            -83
                                             -82
                                                  -80
                                                        -81
                                                             -81
                                                                                    -71
##
    [743]
            -67
                 -72
                       -68
                                  -67
                                       -64
                                             -66
                                                  -68
                                                             -66
                                                                   -65
                                                                        -60
                                                                              -56
                            -64
                                                        -66
                                                                                    -51
##
    [757]
            -47
                 -49
                       -53
                            -48
                                  -53
                                       -50
                                             -52
                                                  -56
                                                        -54
                                                              -58
                                                                   -58
                                                                        -59
                                                                              -60
                                                                                    -58
##
    [771]
            -54
                 -54
                       -57
                            -57
                                  -53
                                       -49
                                             -53
                                                  -55
                                                        -50
                                                             -49
                                                                   -49
                                                                        -49
                                                                              -46
                                                                                    -44
##
    [785]
            -43
                 -39
                       -42
                            -42
                                  -45
                                       -46
                                             -45
                                                  -45
                                                        -40
                                                             -45
                                                                   -50
                                                                        -48
                                                                              -48
                                                                                    -47
                                                                              -37
    [799]
            -45
                       -41
                            -39
                                  -43
                                       -40
                                                  -42
                                                        -38
                                                             -34
                                                                   -34
##
                 -46
                                             -42
                                                                        -36
                                                                                    -37
                                                                                    -39
##
    [813]
            -40
                 -44
                       -41
                            -43
                                  -46
                                       -48
                                             -43
                                                  -43
                                                        -46
                                                             -45
                                                                   -44
                                                                        -44
                                                                              -41
##
    [827]
            -40
                 -41
                       -37
                            -36
                                  -31
                                       -35
                                             -35
                                                  -40
                                                        -35
                                                             -31
                                                                   -31
                                                                        -30
                                                                              -31
                                                                                    -31
##
    [841]
            -34
                 -29
                       -33
                            -38
                                  -33
                                       -28
                                             -28
                                                  -25
                                                        -22
                                                             -18
                                                                   -17
                                                                        -22
                                                                              -20
                                                                                    -21
                                                                               -4
##
    [855]
            -21
                       -18
                                                                          -9
                 -18
                            -18
                                  -17
                                       -17
                                             -17
                                                  -15
                                                        -10
                                                              -10
                                                                    -6
                                                                                      0
    [869]
                                                    -5
                                                         -2
                                                                           2
##
             -2
                  -3
                        -1
                              1
                                    3
                                         3
                                              -1
                                                              -2
                                                                     1
                                                                                6
                                                                                      4
##
    [883]
              8
                  13
                        12
                             16
                                   20
                                        21
                                              16
                                                    17
                                                         12
                                                               15
                                                                    18
                                                                          20
                                                                               19
                                                                                     17
##
    [897]
             17
                  18
                        19
                             20
                                   24
                                        27
                                              24
                                                    24
                                                         19
                                                              22
                                                                    22
                                                                          18
                                                                               23
                                                                                     26
##
    [911]
             30
                  31
                             29
                                   26
                                        25
                                              25
                                                    28
                                                         25
                                                              29
                                                                    27
                                                                          26
                                                                               25
                                                                                     24
                        34
                             17
                                                               22
##
    [925]
             24
                  20
                        18
                                   19
                                        20
                                              18
                                                    23
                                                         22
                                                                    21
                                                                          25
                                                                               23
                                                                                     19
##
    [939]
                        25
                             29
                                   33
                                        33
                                              28
                                                         20
                                                              20
                                                                    23
                                                                          22
                                                                               22
             21
                  22
                                                    23
                                                                                     24
##
    [953]
             20
                  22
                        18
                             19
                                   23
                                        21
                                              24
                                                    22
                                                         26
                                                               23
                                                                    23
                                                                          21
                                                                               25
                                                                                     25
##
    [967]
             25
                  29
                        30
                             35
                                   39
                                        36
                                              35
                                                    35
                                                         32
                                                               33
                                                                    32
                                                                          32
                                                                               27
                                                                                     26
##
    [981]
             25
                  25
                        21
                             22
                                   24
                                        26
                                              23
                                                    22
                                                         26
                                                               26
                                                                    22
                                                                          19
                                                                               22
                                                                                     26
##
    [995]
             26
                  24
                        24
                             25
                                   28
                                        24
```