# Lab 6: M-script file

1. a) Create a file called **mysphere.mat**

   b) Create and plot a sphere using **sphere** function. Sphere function creates a unit circle which can be scaled using surf function (**hint**: try different values of 'r' using surf function).

   c) Run and observe the output

   d) What is your observation?

2. a) Create an excel sheet consisting the following data :

| Temperatures of Cities as on 20.6.2006 | | |
|---|---|---|
| **City** | **Max.** | **Min.** |
| **Ahmedabad** | 38°C | 29°C |
| **Amritsar** | 37°C | 26°C |
| **Bangalore** | 28°C | 21°C |
| **Chennai** | 36°C | 27°C |
| **Delhi** | 38°C | 28°C |
| **Jaipur** | 39°C | 29°C |
| **Jammu** | 41°C | 26°C |
| **Mumbai** | 32°C | 27°C |

   b) Explore **xlsread** function using help

   c) Read the excel file created in step a) using xlsread function

   d) Create an M-File and write a script which finds the following:

      i) Compare and identify the city that recorded the max temperature

      ii) Plot the given data using bar graph.

3) i) Create an excel file with the following data:

| Roll No | Name | Accountancy | English | Maths | Economics | Business Studies |
|---|---|---|---|---|---|---|
| 1 | Akhilesh | 97 | 36 | 47 | 13 | 34 |
| 2 | Ruchi | 69 | 85 | 86 | 51 | 53 |
| 3 | Bhawna | 19 | 72 | 41 | 53 | 40 |
| 4 | Isha | 76 | 68 | 46 | 11 | 22 |
| 5 | Chetan | 55 | 31 | 56 | 99 | 93 |
| 6 | Neeti | 84 | 57 | 68 | 30 | 31 |
| 7 | Chanchal | 18 | 46 | 51 | 63 | 22 |
| 8 | Preeti | 93 | 93 | 31 | 93 | 20 |
| 9 | Richa | 33 | 89 | 55 | 46 | 69 |
| 10 | Manish | 21 | 27 | 84 | 82 | 96 |
| 11 | Karun | 13 | 48 | 27 | 26 | 38 |
| 12 | Madhur | 85 | 74 | 26 | 53 | 84 |
| 13 | Nitesh | 28 | 31 | 27 | 77 | 17 |

ii) Read the file in matlab using **xlsread**

iii) Create a function **tot_marks** to calculate total marks of each Student.

iv) Create function **avg** to calculate average marks of each student.

v) Plot the marks obtained in step III) using bar graph