**TECHNICAL DOCUMENTATION:**

Overview of the project code: The project includes the following parts:

* A Jupyter notebook containing python code for querying data and generating graphs using python libraries.
* PDF version of the notebook with generated graphs and output to view for reference.
* The code can be run again as standalone component to view the graphs provided you have the following software installed on your device
  + Python: Version 3.8
  + Python Libraries:
    - Jupyter notebook:
    - Matplotlib:
    - Pandas: pip install pandas
    - NumPy: pip install matplotlib
    - Seaborn
    - Text Blob
  + MySQL Database: Version 8.

Steps for setup required to run the project:

1. Install Python
2. Install MySQL Database
3. Import the database shared by the client “Bookmein2.sql” into MySQL db.
4. Install the required python libraries: Run the following commands in the command prompt
   1. Install Jupyter: Rin command - “pip install jupyter”
   2. Install Pandas: Run Command - “pip install pandas”
   3. Install Numpy: Run Command - “pip install numpy”
   4. Install Matplotlib: Run Command - “pip install matplotlib”
   5. Install Seaborn: Run command - “pip install seaborn”
   6. Install Textblob: Run command - “pip install textblob”
5. Create Views required for data analysis from the MySQL workbench: Some queries included in the notebook require previously created views in the database.
   1. The queries for creating views are in commented form in the notebook. Make sure all previous cells containing view creations are run before any query. View creation queries are also included below:

Queries to create views for data Analysis

1. Name of view : reg\_events\_view

Query:

“””CREATE VIEW reg\_events\_view AS

SELECT events.event\_type,events.start\_time,events.end\_time,events.seminar\_video\_link,

events.question\_to\_delegate\_pre\_count,events.question\_to\_delegate\_during\_count,events.question\_to\_delegate\_after\_count,

registrations.id,registrations.preregistration,registrations.time\_registered,registrations.registered,

registrations.event\_id,registrations.attendee\_id,registrations.greeting\_notes

FROM events

INNER JOIN registrations

ON events.id = registrations.event\_id;”””

2. Name of view: reg\_event\_attendee\_view

Query:

“””CREATE VIEW reg\_event\_attendee\_view AS

SELECT reg\_events\_view.event\_type,reg\_events\_view.preregistration,reg\_events\_view.time\_registered,reg\_events\_view.registered,reg\_events\_view.event\_id,reg\_events\_view.attendee\_id,attendees.typeid

FROM reg\_events\_view

INNER JOIN attendees

ON attendees.id = reg\_events\_view.attendee\_id;”””

3. Name of view: reg\_attendee\_session\_tracking\_view

Query:

“””CREATE VIEW reg\_attendee\_session\_tracking\_view AS

SELECT attendee\_session\_tracking.attendeeid,attendee\_session\_tracking.eventid,attendee\_session\_tracking.date\_pinged,

registrations.id,registrations.preregistration,registrations.time\_registered,registrations.registered,

registrations.event\_id,registrations.greeting\_notes

FROM attendee\_session\_tracking

INNER JOIN registrations

ON attendee\_session\_tracking.attendeeid = registrations.attendee\_id;”””

4. Name of view: attendee\_stand\_tracking\_view

Query:

“””CREATE VIEW attendee\_stand\_tracking\_view AS

SELECT attendee\_stand\_tracking.attendeeid,attendee\_stand\_tracking.eventid,attendee\_stand\_tracking.date\_pinged,

attendees.typeid,attendees.exhibitoraccount

FROM attendee\_stand\_tracking

INNER JOIN attendees

ON attendees.id = attendee\_stand\_tracking.attendeeid;”””

5. Name of view: SessionTracking

Query:

“””CREATE VIEW SessionTracking (EVENT\_ID, DELEGATE, STAMP) AS

SELECT eventid, attendeeid, date\_pinged

FROM attendee\_session\_tracking “””

6. Name of view: StandTracking

Query:

“””CREATE VIEW StandTracking (EVENT\_ID, DELEGATE, STAMP) AS

SELECT eventid, attendeeid, date\_pinged

FROM attendee\_stand\_tracking"””

7. Name of view: SessionStandTrackingUnion

Query:

“””CREATE VIEW SessionStandTrackingUnion AS

(SELECT \* FROM SessionTracking UNION SELECT \* FROM StandTracking) “””

8. Name of view: EVENT\_VIEWER\_TIMES

Query:

“”” CREATE VIEW EVENT\_VIEWER\_TIMES (DELEGATE, EVENT\_ID, MINUTES\_VIEWED) AS SELECT DELEGATE, EVENT\_ID, (count(STAMP) / 6) FROM attendees, SessionStandTrackingUnion where DELEGATE = id and typeid = 327 and exhibitoraccount = 0 group by DELEGATE, EVENT\_ID order by EVENT\_ID; “””

9. Name of view: time\_at\_stands

Query:

“”” CREATE VIEW time\_at\_stands AS

SELECT attendeeid, eventid, TIMEDIFF(MAX(date\_pinged), MIN(date\_pinged)) AS TimeSpent

FROM attendee\_session\_tracking

GROUP BY attendeeid, eventid

ORDER BY attendeeid; “””

10. Name of view: time\_at\_each\_stand

Query:

“”” CREATE VIEW time\_at\_each\_stand AS

SELECT eventid,

SUM(TimeSpent)

FROM time\_at\_stands

GROUP BY eventid; “””