

CSCI 585 HW3 Report

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For this assignment, I choose 11 places to point in the map. Except for the 5 places are required, I choose Massman Theartre, Olin Hall, Bovard Auditorium, Leavey Library, Doheny Memorial and Capone Lab as other places to analyse. The reason I choose them is that parts of them are all the place I usually go to and the rest of them are the place I am curious for. Olin Hall is the place I had my classes. Bovard Auditorium, Leavey and Doheny library are also familiar to me. I've heard of massman theartre and capone lab from my friends.

KML FILE FOR 5A

```
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<kml xmlns="http://earth.google.com/kml/2.0">
<Document>
<Style id="s">
<IconStyle><Icon><href>http://www.google.com/intl/en_us/mapfiles/ms/micons
/blue-dot.png</href></Icon></IconStyle>
</Style>

<Placemark><name>My Home</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.290372,34.027550</coordinates></Point>
</Placemark>

<Placemark><name>Vermont/Jefferson</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.291613,34.025473</coordinates></Point>
</Placemark>

<Placemark><name>Exposition/Vermont</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.291526,34.018355</coordinates></Point>
</Placemark>
```

<Placemark><name>Jefferson/Figueroa</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.280027,34.022035</coordinates></Point>
</Placemark>

<Placemark><name>Figueroa/Exposition</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.282316,34.018428</coordinates></Point>
</Placemark>

<Placemark><name>Olin Hall</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.289694,34.020625</coordinates></Point>
</Placemark>

<Placemark><name>Massman Theartre</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.289975,34.022699</coordinates></Point>
</Placemark>

<Placemark><name>Bovard Auditorium</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.285538,34.020923</coordinates></Point>
</Placemark>

<Placemark><name>Leavey Library</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.282819,34.021796</coordinates></Point>
</Placemark>

<Placemark><name>Doheny Memorial</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.283755,34.020138</coordinates></Point>
</Placemark>

<Placemark><name>Capone Lab</name>

```
<styleUrl>#s</styleUrl><Point><coordinates>-  
118.284976,34.019706</coordinates></Point>  
</Placemark>
```

```
<Style id="transBluePoly">  
  <LineStyle>  
    <width>1.5</width>  
  </LineStyle>  
  <PolyStyle>  
    <color>7dff0000</color>  
  </PolyStyle>  
</Style>  
<Placemark>  
  <name>Convex Hull</name>  
  <visibility>1</visibility>  
  <styleUrl>#transBluePoly</styleUrl>  
  <Polygon>  
    <extrude>1</extrude>  
    <altitudeMode>relativeToGround</altitudeMode>  
    <outerBoundaryIs>  
      <LinearRing>  
        <coordinates> -118.291526,34.018355,17  
          -118.291613,34.025473,17  
          -118.290372,34.02755,17  
          -118.280027,34.022035,17  
          -118.282316,34.018428,17  
          -118.291526,34.018355,17</coordinates>  
      </LinearRing>  
    </outerBoundaryIs>  
  </Polygon>  
</Placemark>  
</Document>  
</kml>
```

KML FILE FOR 5B

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<kml xmlns="http://earth.google.com/kml/2.0">
<Document>
<Style id="s">
<IconStyle><Icon><href>http://www.google.com/intl/en_us/mapfiles/ms/micons
/blue-dot.png</href></Icon></IconStyle>
</Style>
```

```
<Placemark><name>My Home</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.290372,34.027550</coordinates></Point>
</Placemark>
```

```
<Placemark><name>Vermont/Jefferson</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.291613,34.025473</coordinates></Point>
</Placemark>
```

```
<Placemark><name>Exposition/Vermont</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.291526,34.018355</coordinates></Point>
</Placemark>
```

```
<Placemark><name>Jefferson/Figueroa</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.280027,34.022035</coordinates></Point>
</Placemark>
```

```
<Placemark><name>Figueroa/Exposition</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.282316,34.018428</coordinates></Point>
</Placemark>
```

```
<Placemark><name>Olin Hall</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.289694,34.020625</coordinates></Point>
</Placemark>
```

<Placemark><name>Massman Theartre</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.289975,34.022699</coordinates></Point>
</Placemark>

<Placemark><name>Bovard Auditorium</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.285538,34.020923</coordinates></Point>
</Placemark>

<Placemark><name>Leavey Library</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.282819,34.021796</coordinates></Point>
</Placemark>

<Placemark><name>Doheny Memorial</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.283755,34.020138</coordinates></Point>
</Placemark>

<Placemark><name>Capone Lab</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.284976,34.019706</coordinates></Point>
</Placemark>

<Style id="transBluePoly">
<LineStyle>
<width>1.5</width>
</LineStyle>
<PolyStyle>
<color>7dff0000</color>
</PolyStyle>
</Style>
<Placemark>
<name>Convex Hull</name>
<visibility>1</visibility>

```

<styleUrl>#transBluePoly</styleUrl>
<Polygon>
  <extrude>1</extrude>
  <altitudeMode>relativeToGround</altitudeMode>
  <outerBoundaryIs>
    <LinearRing>
      <coordinates> -118.291526,34.018355,17
        -118.291613,34.025473,17
        -118.290372,34.02755,17
        -118.282819,34.021796,17
        -118.283755,34.020138,17
        -118.284976,34.019706,17
        -118.291526,34.018355,17
      </coordinates>
    </LinearRing>
  </outerBoundaryIs>
</Polygon>
</Placemark>
</Document>
</kml>

```

```

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<kml xmlns="http://earth.google.com/kml/2.0">
  <Document>
    <Style id="s">
      <IconStyle><Icon><href>http://www.google.com/intl/en_us/mapfiles/ms/micons
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    </Style>

```

```

    <Placemark><name>My Home</name>
    <styleUrl>#s</styleUrl><Point><coordinates>-
    118.290372,34.027550</coordinates></Point>
    </Placemark>

```

```

    <Placemark><name>Vermont/Jefferson</name>

```

<styleUrl>#s</styleUrl><Point><coordinates>-
118.291613,34.025473</coordinates></Point>
</Placemark>

<Placemark><name>Exposition/Vermont</name>
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<Placemark><name>Jefferson/Figueroa</name>
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<Placemark><name>Figueroa/Exposition</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.282316,34.018428</coordinates></Point>
</Placemark>

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118.289975,34.022699</coordinates></Point>
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<Placemark><name>Bovard Auditorium</name>
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118.285538,34.020923</coordinates></Point>
</Placemark>

<Placemark><name>Leavey Library</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.282819,34.021796</coordinates></Point>

</Placemark>

<Placemark><name>Doheny Memorial</name>
<styleUrl>#s</styleUrl><Point><coordinates>-
118.283755,34.020138</coordinates></Point>
</Placemark>

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<styleUrl>#s</styleUrl><Point><coordinates>-
118.284976,34.019706</coordinates></Point>
</Placemark>

<Style id="transBluePoly">
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<width>1.5</width>
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<color>7dff0000</color>
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<Placemark>
<name>Convex Hull</name>
<visibility>1</visibility>
<styleUrl>#transBluePoly</styleUrl>
<Polygon>
<extrude>1</extrude>
<altitudeMode>relativeToGround</altitudeMode>
<outerBoundaryIs>
<LinearRing>
<coordinates> -118.282316,34.018428,17
-118.289694,34.020625,17
-118.289975,34.022699,17
-118.280027,34.022035,17
-118.282316,34.018428,17
</coordinates>
</LinearRing>


```
</outerBoundaryIs>
</Polygon>
</Placemark>
</Document>
</kml>
```

Table creation Command :

```
create table spatialDB(
ID Integer not null,
Name varchar(50) not null,
Point geometry not null,
Primary key(ID));
```

insert into spatialDB values

```
(1,'My Home',ST_MakePoint(-118.290372,34.027550)),
(2,'Vermont/Jefferson',ST_MakePoint(-118.291613,34.025473)),
(3,'Exposition/Vermont',ST_MakePoint(-118.291526,34.018355)),
(4,'Jefferson/Figueroa',ST_MakePoint(-118.280027,34.022035)),
(5,'Figueroa/Exposition',ST_MakePoint(-118.282316,34.018428)),
(6,'Olin Hall',ST_MakePoint(-118.289694,34.020625)),
(7,'Massman Theatre',ST_MakePoint(-118.289975,34.022699)),
(8,'Bovard Auditorium',ST_MakePoint(-118.285538,34.020923)),
(9,'Leavey Library',ST_MakePoint(-118.282819,34.021796)),
(10,'Doheny Memorial',ST_MakePoint(-118.283755,34.020138)),
(11,'Capone Lab',ST_MakePoint(-118.284976,34.019706));
```

Query for question a:

```
select ST_AsText(ST_ConvexHull
(ST_Collect(Point))) from spatialDB;
```

```
result: POLYGON((-118.291526 34.018355,-118.291613 34.025473,-118.290372
34.02755,-118.280027 34.022035,-118.282316 34.018428,-118.291526
34.018355))
```

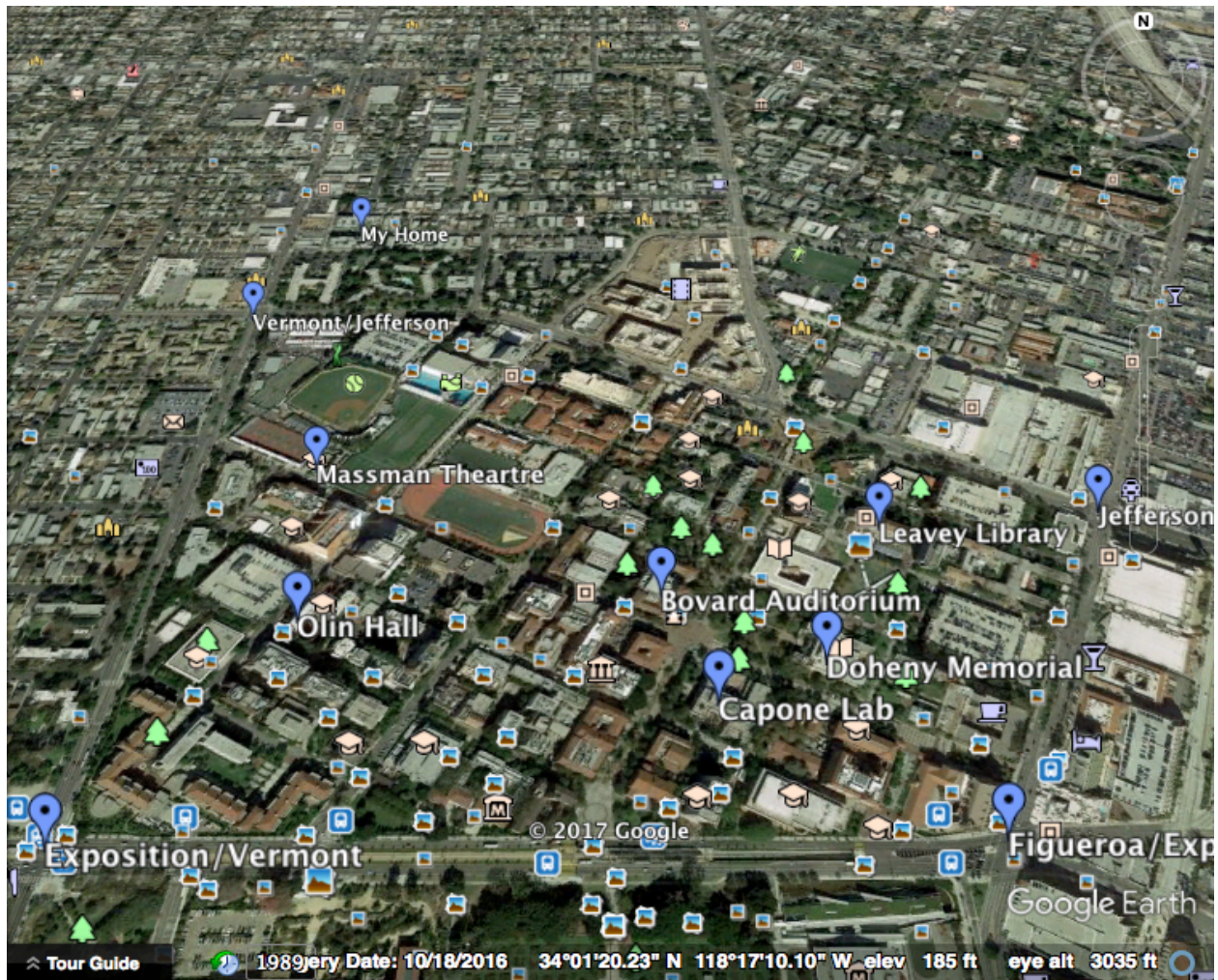
Query for question b:

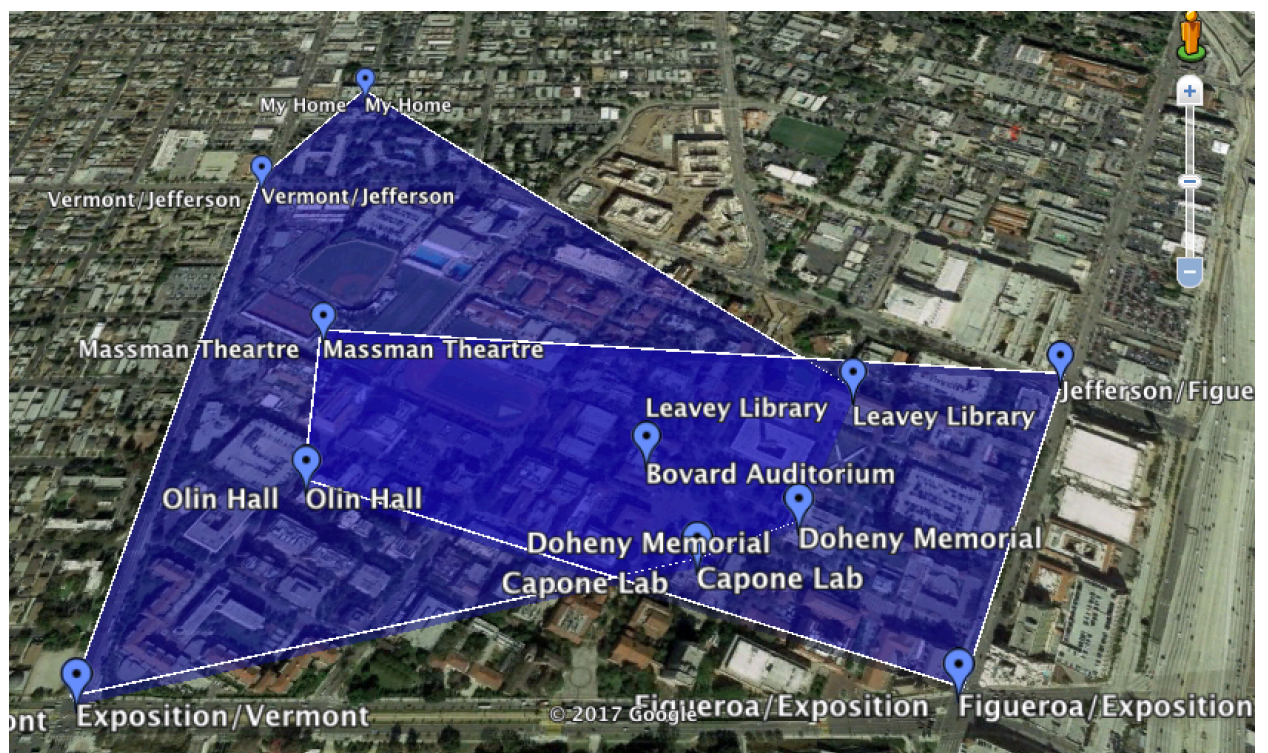
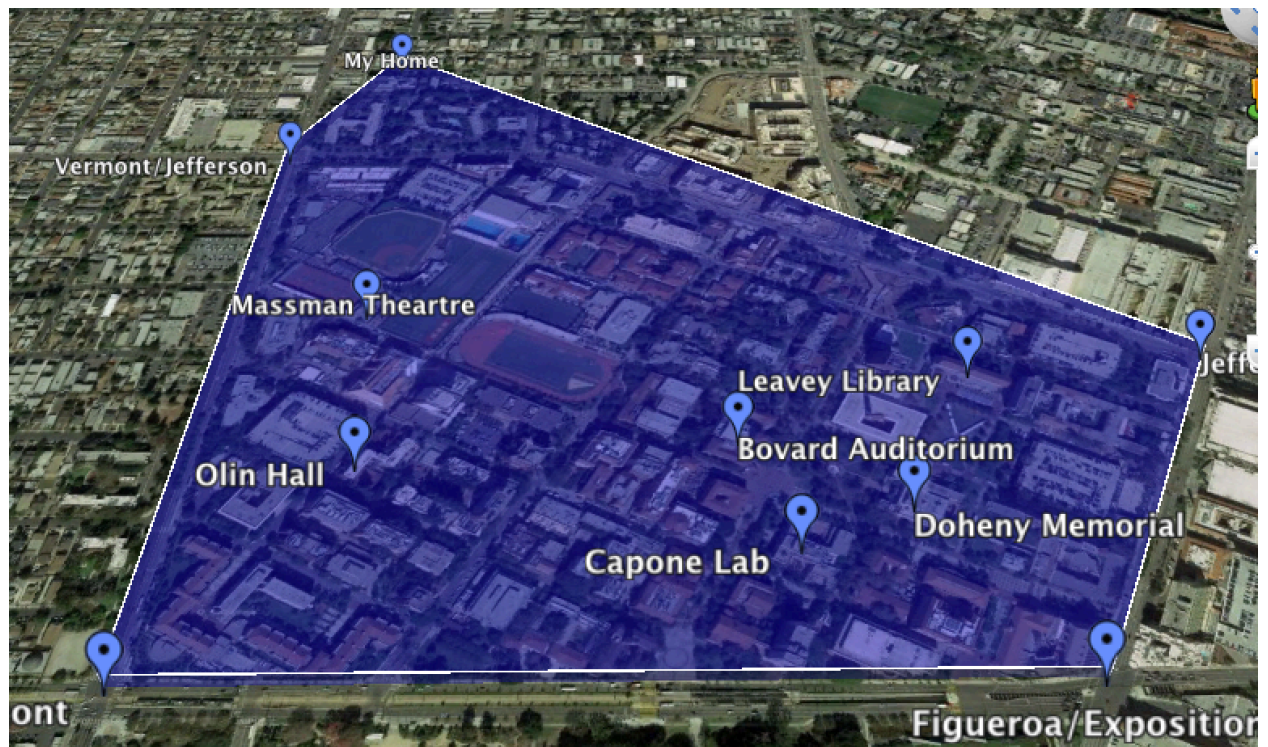
```
SELECT ST_Disjoint(  
  (  
    select ST_AsText(ST_ConvexHull  
      (ST_Collect(Point))) from spatialDB where ID BETWEEN 1 AND 3 OR ID  
BETWEEN 9 AND 11  
  ),  
  (  
    select ST_AsText(ST_ConvexHull  
      (ST_Collect(Point))) from spatialDB where ID BETWEEN 4 AND 8  
  )  
);
```

result:

<input type="checkbox"/>	st_disj boolean
<input type="checkbox"/>	false

Screen shot for question 5 :





Issue id	Issue description	Issue solution
1	Can't connect AWS from Local. PgAdmin4 shows error when connecting to AWS.	Reset the port.
2	Can't use postGIS.	Execute the sql sentence: create extension postgis
3	Can't draw the proper graph for convex hull.	Add altitude value to every coordinate.