جامعة الملك فهد للبترول والمعادن
**King Fahd University of Petroleum & Minerals**

**Geographical Information System (GIS)**

Term Paper for CRP 514 - 122

**GIS application in tourism promotion**

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# Objective

The main objective of this study is to apply **Jordan** case study in **Tarim** city in **Hadramout**–Yemen.

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# Introduction

**GIS application in tourism promotion**

➢**Definition of Tourism**

"Tourism is a composite of activities, facilities, services and industries that deliver a travel experience". (Tourism and Leisure Committee, 1997)

➢**The success of any tourism business:**
1. Tourism development and research.
2. Tourism planning.
3. Tourism marketing.

➢ **GIS in tourism.**
1. GIS features.
2. GIS uses.
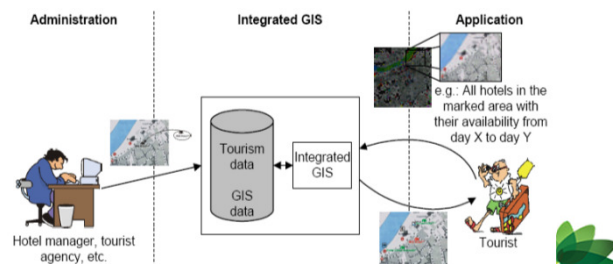
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# Why do we need GIS?

**Using GIS application in tourism**

➢ **Why do we need GIS?**
- GIS is important for what it can do such as to: connect, identify, select, analyze, query.
- The GIS database will help in analyzing, improving, monitoring, decision-making and optimal planning.

➢ **GIS Application**
- Combine attributes.
- Query by selecting tourist criteria.



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# Case Study (cont.)

**Geographic Information System for Tourism Management**

## i.  Introduction

– The study and project are applied in Jordan city.

– Providing tourists with all the needed facilities

– Amman, Madaba, Aqaba, Um-Qes, Jarash, and Petra.

• Accomplished by queries in GIS Design and Application for Tourism:

– Determination of important and necessary places for tourism.

– Determination of historical and tourist places.

– Determination of the best suitable hotel.

– Determination of the optimum plan for sightseeing places

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# Case Study (cont.)

## ii.  Objectives.

1.  Conduct GIS model for tourism (facilities).

2.  Conserve historical sites.

3.  Promote tourism in country.

4.  Increasing economic of country.

5.  Providing tourists with all the needed services.

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# Case Study (cont.)

## iii.Problems of tourism in Jordan.

1.  Lack of digital information for tourists facilities and destinations.

2.  Lack of comprehensive information based on the internet.

3.  Inadequate motivation for effective marketing.

4.  Inadequate analysis of cities tourism.

5.  Inadequate promotion of cities in Jordan.

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# Case Study (cont.)

### iv. Methodology.

The all kinds of data in its different forms were collected and shaped to build a GIS System.

- **Collect data**
    - i. **Spatial data.**

        is related to the space and its location on the surface of the earth.

        They (Maps) were scanned to provide all the needed raster data.
    - ii. **Attributes data.**

        Most of the attribute data was collected from governmental agencies, and still needs to be improved.

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# Case Study (cont.)

### iv. Methodology (cont.)

- **Data processing**
    - Creating GIS using the available and collected data using ArcGIS software.

- **Defining the coordinate system.**
    - Jerash, Madaba, and Aqaba are referenced to points.

- **Scanning of the maps** and the satellite image to convert them into digital format.

- **Digitizing the maps and the image**

    to convert the features into digital format in order to build layers

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# Case Study (cont.)

iv. **Methodology (cont.)**

•   **Digitizing the maps and the image**

to convert the features into digital format in order to build layers. See Fig. 2

The output layers are hotels, bus stations, main streets, sub streets, railway, traffic circles, housing areas, green areas, bridges, etc.

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Figure 2: Digitized Aqaba Satellite Image
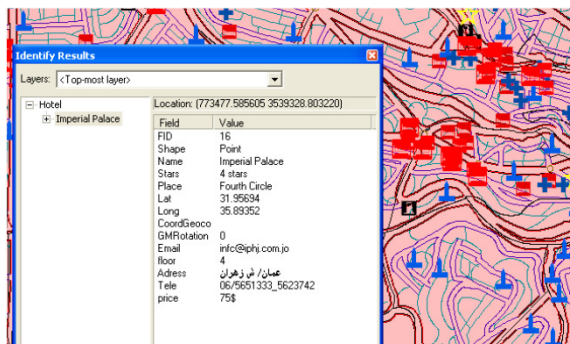
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# Case Study (cont.)

v.   **Analysis and results.**

GIS analysis is the process for looking at geographic patterns.

In the following they present some of the functions of the GIS and examples:

1.   Spatial information such as , where can I find "The LeRoyal Hotel" in Amman city?

2.   Identify is the fastest way for getting info. about features. See Fig. 3
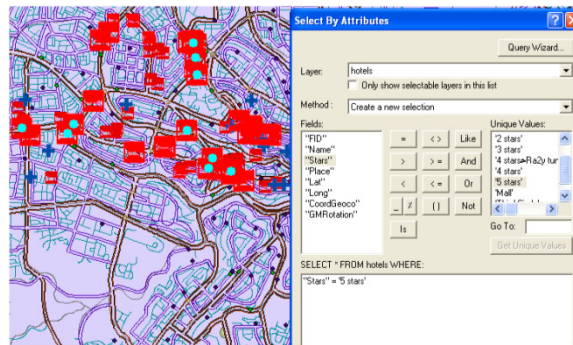
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Figure 3: Identify the place hotel

# Case Study (cont.)

**v.  Analysis and results.**

   **3.**    Query data by attribute when the features could be selected using the Standard Query Language (SQL) see Fig. 4



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Figure 4: Five Stars Hotels in Amman

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# Case Study (cont.)

**v.  Analysis and results.**

     All above examples can be used to serve tourists and offer many jobs that can be created for tourist planners, private business, public agencies, in order to help in serving and developing tourism.
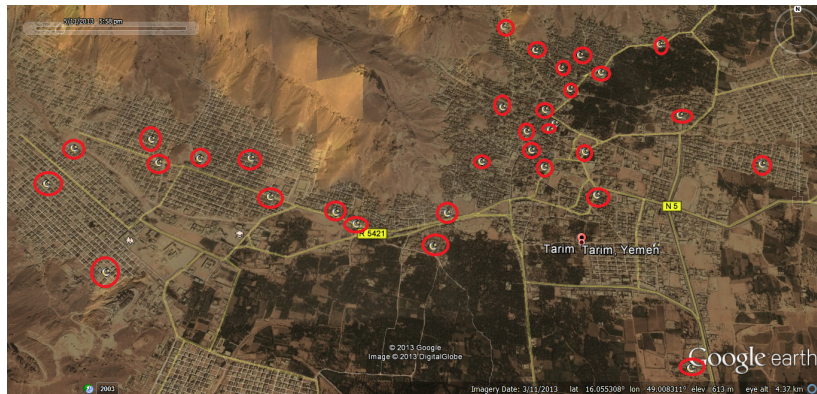
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# Tarim City

Now, we apply this case in our case ' Tarim city '

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# Collect and design data

➢ Collect simple data.

    – Names.

    – Owners.

    – Information.

    – Locations.

| Hotels | Desteniation | Mosques | Location | |
|--------|--------------|---------|----------|--|
| Field Name | | Data Type | | |
| ID | | AutoNumber | | |
| Name | | Text | | |
| Owner | | Text | | |
| information | | Text | | |
| x | | Number | | |
| y | | Number | | |

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# Example of information

➤ **Example of data**

- – Name: Almuhdar Mosque
- – Owner: Omar ALmuhdar
- – Information:
  - منارة المحضارة دليلاً على تقدم •
    الفن المعماري في حضرموت
- – Locations:
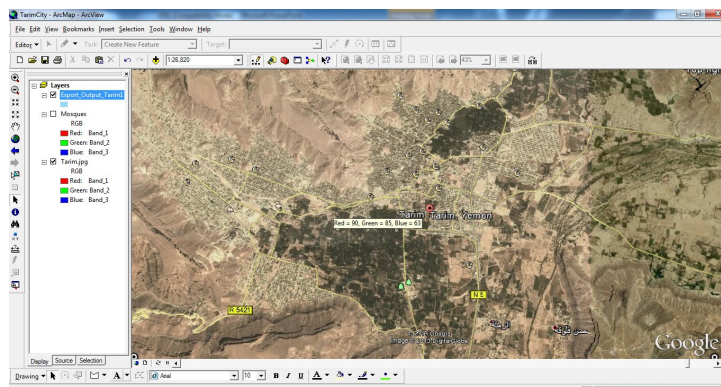  - Latitude: 16.054526
  - Longitude: 48.998373



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# Dealing with map

➤ **Import image map to ArcMap**



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# Discover Information

➢ **Discover information using Hyperlink**



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# Some issues

❑ Finally, we face some problems as following:

- Lack of data.

- Shortage of time.

❑ Future work

- Collect more data.

- Link this data to our application.

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# Conclusion

- GIS application is a strong and effective tool that can improve tourism management and promotion.

- Providing users with all their needed.

- GIS offers to keep us up to date with information.

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# Thank you for listening ^_^

## Feel free to ask

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