A close-up of a logo

Description automatically generated with low confidence

**COS 221**

Practical Assignment 5

Group 5: <name>

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| --- | --- | --- | --- |
| Jacobus Smit |  |  | u21489476 |
| Iwan de Jong |  |  | u22498037 |
| Rebecca Oosthuizen |  |  | u20512008 |
| Ashley Tullis |  |  | u22486985 |
| Dawie Reyneke |  |  | u21438112 |
| Tiaan Pouwels |  |  | u21675229 |

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**Task 1: Research**

As of May 2022, the tourism industry in South Africa accounts for 3,7% of the country’s gross domestic product. This industry is an important driver of South Africa’s economy and contributes to job creation and cultural exchange. In the fallout of the Covid-19 pandemic, the tourism industry was among the most negatively affected sectors, experiencing a global decline and resulting in a loss of countless jobs and businesses.

The National Department of Tourism wants to make South Africa a wine tourism hotspot, given its position as a global leader in wine production.

Wine is an alcoholic beverage made of fermented grape juice, while a winery is a licensed property that produces wine. There are a number of wine and winery varieties and characteristics that are pertinent to a wine tourist when deciding where to go and what wines to try.

We, as a team of second year Computer Science students have been contracted to design and implement a wine tourism project. Using our research on wine and wineries, these are the specifications of the project we will build:

**Functional Requirements:**

* The user should be able to view the various wines in the system, along with their type, region, winery, rating, etc. (we need to decide which wine attributes we want to include and add them here)
* The user should be able to easily filter the wines in the system.
* The user should be able to view the various wineries and wine farms in the system, along with their location, available wines, etc (we need to decide which winery attributes we want to include and add them here)
* The user should be able to review wines (need to decide how reviews are done, can they just leave a rating, or should they be able to leave a written review which other users can see?)
* ‘Verified’ wineries should be able to add new wines to their catalog.
* The user should be able to login to the web-based application.
* The application should be able to manage users, wines, wineries, sites, addresses and locations.
* The application should be able to sort wines by various attributes (add what attributes we use).
* The application should be able to update the databases.
* The application should be able to suggest the best destinations based on a user’s location.

**References**

[1] <https://www.gov.za/speeches/deputy-minister-lindiwe-sisulu-tourism-dept-budget-vote-202223-19-may-2022-0000>

[2] <https://www.unwto.org/tourism-data/international-tourism-and-covid-19>

[3] <https://winefolly.com/deep-dive/what-is-wine/>

[4] <https://foodandroad.com/what-is-wine-tourism/>

[5] <https://cgtwines.com/the-difference-between-a-winery-and-a-vineyard/>

**Task 2: (E)ER-Diagram**

All diagram versions and how they improve on previous versions

Include all assumptions and necessary information

**Task 3: (E)ER-Diagram to Relational Mapping**

Each step of conversion

Include all assumptions and choices

**Task 4: Relational Schema**

Visual diagram and SQL statements

Include keys, constraints, types, and checks

**Task 6: Data**

Explain population method choice and give reasons