

**Bachelor of Science in Computer Science**

**(BSCS)**

Shape

**Web Semantic PROJECT**

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|  | BSCS51F20R011 Umaima  BSCS51F20R044 Gul la lae  BSCS51F20R050 Hajra Anwar  BSCS51F20R050 Madiha |

Shape

**Course Faculty Name:** Sir Fahad Maqbool

**Department of Computer Science**

1. Purpose:

The goal is to help people build houses that stay cool in the summer, warm in the winter, and filled with natural light during the day, just by how they're designed.

2. Scope:

-We'll talk about where to put windows, how to arrange rooms, and what materials to use so your house catches breezes and sunlight in the best way possible.

3. Implementation Language:

We'll use clear and simple language, like easy-to-follow instructions or pictures, to explain how to design homes that feel great to live in.

4. Intended End-Users:

Anyone who's planning to build a house or wants to make their current home more comfortable and energy-efficient.

5. Intended Uses:

This information will help architects, builders, and homeowners figure out the best ways to design homes that don't need too much heating or cooling and are bright and airy.

6. Ontology Requirements:

a. **Non-Functional Requirements:**

Make sure all the advice is easy to understand and can be used for different types of homes, no matter where they're located.

- Keep it simple and straightforward so anyone, even if they're not experts, can use it to improve their home.

b**. Functional Requirements: Groups of Competency Questions:**

- Group 1: Window Placement and Building Orientation:

Answer questions like "Where should I put windows to let in the most breeze?" and "Which way should my house face to catch the wind?"

-Group 2: Solar Exposure and Daylighting:

Help with questions such as "How can I make sure my house gets enough sunlight without getting too hot?" and "What's the best way to use sunlight to light up my home during the day?"

7. Pre-Glossary of Terms:

a. **Terms from Competency Questions:**

Window placement, wind direction, solar exposure, building orientation, cross-ventilation, daylighting.

b. **Terms from Answers:**

Building materials, passive solar design, smart window technologies, thermal comfort.

c. **Objects:**

Buildings, rooms, windows, doors, ventilation systems, sun position, wind direction.

we ensure that the ontology provides practical guidance for designing homes that are comfortable, energy-efficient, and filled with natural light and fresh air