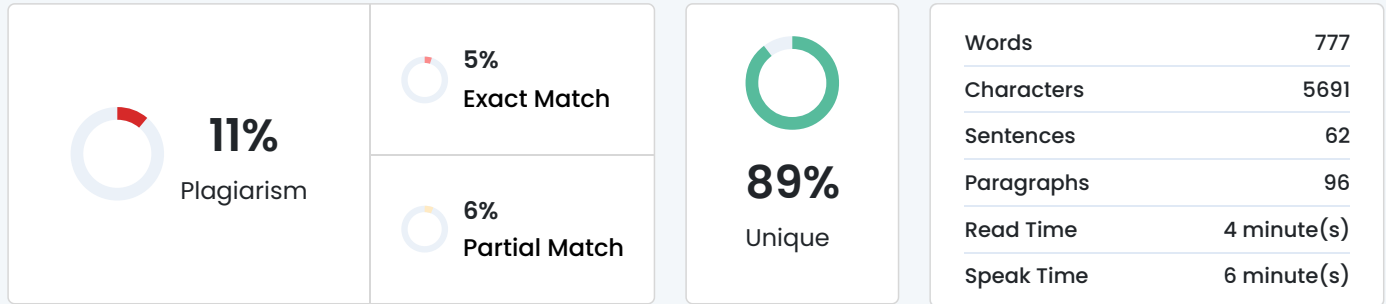


## Plagiarism Scan Report



## Content Checked For Plagiarism

CAUC607 – Green Computing  
Assignment – 2  
Student ID : 24MCA134  
Carbon Footprint

Q-1. Case Study on Green Asset Design: Select any one type of Green Asset (Green Buildings, Data Centers, Networks, Devices, or Information Systems). Conduct a detailed study on its design and development model that promotes energy conservation. Your report should include key features, technologies used, benefits, and real-world examples (if any).

### Green Asset Design in the Built Environment: A Study of Sustainability

#### 1. Introduction

Green Asset Design means building homes and other structures in a way that helps the environment, keeps people healthy, and also saves money. Today, many companies and governments understand that sustainability is important for the future. Sustainability is often explained using the Triple Bottom Line, which means taking care of three main things:

1. Economic – saving money and managing costs,
2. Environmental – protecting nature and using resources wisely,
3. Social – helping people and communities live better.

#### 2. Key Features of Green Asset Design

##### Feature Explanation

##### Life Cycle

##### Thinking

This means thinking about the building from the beginning (planning and construction) to the end (demolition or reuse), including all impacts on the environment and people throughout this life.

##### Collaborative

##### Design

Architects, engineers, contractors, and other experts work together early in the project to make better, greener decisions.

##### Use of Eco-

friendly Materials

Materials chosen are safe for the environment and can be reused or recycled, like bamboo or recycled steel.

Energy Efficiency Designs include ways to use less energy, such as better insulation, LED lighting, and solar panels.

Water

Conservation

Systems such as rainwater harvesting and low-flow faucets save water.

Green Building

Certifications

Buildings are evaluated and certified by organizations like LEED (Leadership in Energy and Environmental Design) or IGBC (Indian Green Building Council) for meeting green standards.

### 3. Technologies Used in Green Asset Design

- Solar Energy Systems: Solar panels convert sunlight into electricity, reducing dependence on fossil fuels.
- Rainwater Harvesting: Collecting rainwater from roofs to use for irrigation or toilets.
- LED Lighting: Light bulbs that use much less electricity than traditional bulbs.
- Smart Controls: Automated systems that adjust heating, cooling, and lighting depending on the time of day or occupancy.
- Recycling and Waste Management Systems: Sorting and reusing building materials and everyday waste to reduce landfill use.
- Efficient HVAC Systems: Heating, ventilation, and air conditioning that use less energy but keep indoor air fresh.

### 4. Benefits of Green Asset Design

- Lower Energy Bills: Buildings use less electricity and water, saving money.
- Reduced Environmental Impact: Less pollution and fewer resources are used, protecting ecosystems.
- Better Health and Comfort: Cleaner air, natural daylight, and good ventilation help people feel better and work more effectively.
- Higher Property Value: Sustainable buildings attract more tenants and investors.
- Social Benefits: Green buildings can create jobs, improve community health, and support social equality.
- Long-Term Savings: Although green buildings might cost more upfront, they save money over time because of lower running costs.

### 5. Real-World Examples of Green Asset Design in India

#### 5.1 CII-Sohrabji Godrej Green Business Centre, Hyderabad

This is one of the first green buildings in India to get the Platinum rating from the Indian Green Building Council (IGBC). It uses solar panels to make electricity and rainwater harvesting to save water. It also has energy-saving lights and efficient air conditioning systems to use less power. This building is a good example of an eco-friendly office.

#### 5.2 Infosys Campus, Pune

The Infosys campus in Pune has earned the LEED Platinum certificate for being very eco-friendly. It uses sunlight to light up the offices, which means less need for electric lights. It reuses wastewater and uses green building materials. It also has smart systems that turn off lights and devices when rooms are empty to save energy.

#### 5.3 ITC Green Centre, Gurgaon

The ITC Green Centre uses both technology and care for people. It has solar panels, energy-

saving lights, and a strong waste recycling system. It not only helps the environment but also looks after its workers and the local community through health programs and social activities.

## 6. Conclusion

Green Asset Design is a vital strategy for creating buildings that are good for the economy, environment, and society. It uses new technologies and smart planning to save energy, water, and money, while also improving comfort and health. India's growing cities provide many opportunities to apply these green principles. Projects like the CII-Sohrabji Godrej Green Business Centre, Infosys Pune campus, and ITC Green Centre prove that sustainable building design can work well in India and benefit everyone.

## References

- <https://greenbusinesscentre.com/aboutus.php>
- <https://greenbusinesscentre.com/>
- <https://www.infosys.com/about/esg/environmental/energy/leed-certification.html>
- <https://www.re-thinkingthefuture.com/case-studies/a4417-cii-sohrabji-godrej-green-business-centre-by-karan-grover-and-associates-first-leed-platinum-certified-building-in-india>
- <https://www.re-thinkingthefuture.com/articles/the-itc-green-centre-gurgaon>

## Matched Source

### Similarity 2%

**Title:**Architect Drawing Building – Adjustable & Durable Solutions

Architectural work has to be deliberate. Usually, architects, engineers, contractors, and other experts work together to produce quality work. When◆...

<https://www.alibaba.com/showroom/architect-drawing-building.html>

### Similarity 2%

**Title:**Rainwater and fog harvesting from solar panels

This study aimed to evaluate the quantity of rainwater and fog collected through the utilization of solar panels, while also conducting a feasibility analysis.Missing: make electricity

[https://www.gjesm.net/article\\_711558.html](https://www.gjesm.net/article_711558.html)

### Similarity 2%

**Title:**Smart Lighting Solutions to Reduce Energy Costs in Offices and ...

Jul 10, 2025 ◆ Occupancy and Vacancy Sensors: These devices detect when a room is empty and automatically turn off or dim lights, eliminating wasted energy.

<https://bpoweredelectric.com/smart-lighting-solutions-to-reduce-energy-costs-in-offices-and-retail-spaces>

### Similarity 2%

**Title:**ITC Green Centre, Gurgaon SPBE Assignment | PDF – Scribd

The ITC Green Centre in Gurgaon, India is a LEED Platinum certified building that serves as a model for sustainable design. It uses various green features◆...Missing: care | Show results with:

<https://www.scribd.com/presentation/615342939/ITC-Green-Centre-Gurgaon-SPBE-Assignment-1>

### Similarity 2%

**Title:**Reduce plastic waste by choosing a reusable water bottle. It not only ...

May 19, 2025 ♦ Reduce plastic waste by choosing a reusable water bottle. It not only helps the environment but also reduces the need for single-use plastics.

<https://www.facebook.com/keephoustonbeautiful/posts/reduce-plastic-waste-by-choosing-a-reusable-water-bottle-it-not-only-helps-the-e/1114904884000272>

---

### Similarity 2%

**Title:**(PDF) MODERN DESIGN AND CONSTRUCTION TECHNIQUES WHICH ... - ResearchGate

Feb 6, 2025 · materials is crucial. Projects like the CII-Sohrabji Godrej Green Business Centre and Indira

[https://www.researchgate.net/publication/388754115\\_MODERN\\_DESIGN\\_AND\\_CONSTRUCTION\\_TECHNIQUES\\_WHICH\\_CONTRIBUTE\\_TO\\_ACHIEVE\\_ZERO\\_WASTE\\_IN\\_INTERIOR\\_DESIGN\\_PRACTICES](https://www.researchgate.net/publication/388754115_MODERN_DESIGN_AND_CONSTRUCTION_TECHNIQUES_WHICH_CONTRIBUTE_TO_ACHIEVE_ZERO_WASTE_IN_INTERIOR_DESIGN_PRACTICES)

---