

EDISI 2023

Buletin FKA

Pengajian Kejuruteraan Awam

Universiti Teknologi MARA Cawangan Pulau Pinang



UNIVERSITI
TEKNOLOGI
MARA

eISSN 2716-6325



Diterbitkan pada 15 Oktober 2024

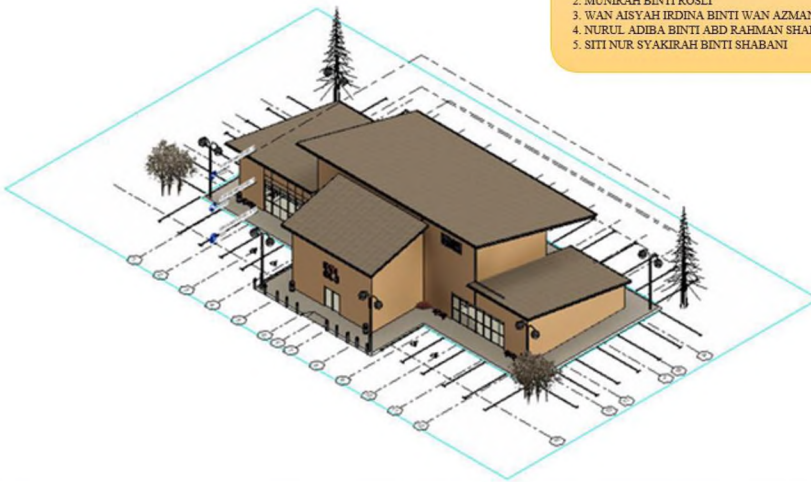
Transforming Spaces: Students Innovate with Technical Drawing Projects

Mohamad Zain Hashim and Muriatul Khusmah Musa

In an impressive showcase of creativity and technical skill, students from the Technical Drawing course have unveiled a series of innovative projects aimed at repurposing a kindergarten building into various community-serving facilities. These projects, part of a larger assignment that combines practical skills with theoretical knowledge, were developed using Autodesk Revit software, illustrating the students' ability to tackle complex civil engineering problems. The assignment tasked students with planning a renovation project for an existing kindergarten, challenging them to convert it into a facility with a completely different purpose without altering the building's footprint, number of floors, staircases, or roof structure. Among the proposed repurposings were a religious school, an old folks' home, a homeless shelter, an orphanage, a medical clinic, a gymnasium, a self-service laundrette, food outlets, retail outlets, and other imaginative conversions. This exercise not only tested the students' architectural and engineering skills but also their ability to envision spaces that respond to community needs.

Group 1

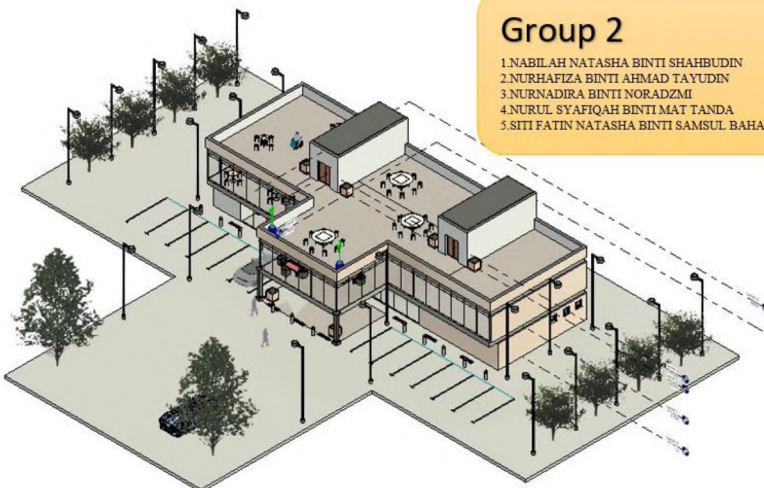
1. NOR IFFAH ALEYA BINTI LATIFF
2. MUNIRAH BINTI ROSLI
3. WAN AISYAH IRDINA BINTI WAN AZMAN
4. NURUL ADIBA BINTI ABD RAHMAN SHAFFIE
5. SITI NUR SYAKIRAH BINTI SHABANI



Group 1 proposed turning the kindergarten into a Uniqlo retail outlet, showcasing their understanding of retail design needs, from customer flow to display areas, within the constraints of the existing structure. Their detailed architectural, landscape, structural, and plumbing models demonstrated a keen eye for both aesthetics and functionality.

Group 2

1. NABILAH NATASHA BINTI SHAHBUDIN
2. NURHAFIZA BINTI AHMAD TAYUDIN
3. NURNADIRA BINTI NORADZMI
4. NURUL SYAFIQAH BINTI MAT TANDA
5. SITI FATIN NATASHA BINTI SAMSUL BAHARI



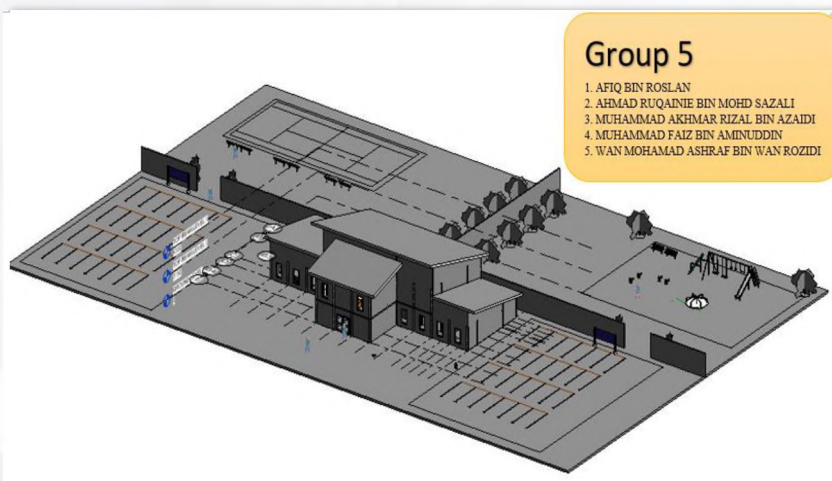
Group 2's vision transformed the space into a 7-Eleven store, emphasizing convenience and accessibility. Their designs included innovative use of interior space to accommodate a wide range of products and a layout that encourages efficient shopping.



Group 3 opted for a cafe-library, blending the love for books with the enjoyment of coffee in a community-friendly environment. Their project stood out for its creative use of space, ensuring areas for both quiet reading and social interaction.



Group 4 took a different approach by converting the kindergarten into a religious (tahfiz) school. Their project paid careful attention to creating a serene and conducive learning environment for students to study religious texts.



Group 5 focused on health and fitness by designing a state-of-the-art gymnasium. Their project included detailed plans for workout areas, equipment placement, and facilities that cater to various fitness routines.



Lastly, Group 6 presented their vision for an old folks' home, emphasizing comfort, accessibility, and community. Their design included thoughtful touches to make the space welcoming and suitable for the elderly.

These projects not only reflect the students' proficiency in using BIM software but also their commitment to addressing real-world issues through architectural design. By adhering to the course and programme learning outcomes, they demonstrated their ability to apply knowledge of mathematics, science, and engineering fundamentals to solve complex problems, a key attribute of successful civil engineering graduates. This exhibition of student projects highlights the importance of technical drawing courses in engineering education. It provides a platform for students to develop essential skills in drafting, model creation, and the practical application of their knowledge, preparing them for future challenges in the engineering and architectural fields. The students' projects are a testament to their hard work, imagination, and technical prowess. As these young engineers and architects move forward in their careers, they carry with them the experience of transforming theoretical knowledge into practical solutions that serve the community. This initiative not only showcases their talent but also their readiness to contribute positively to the built environment.