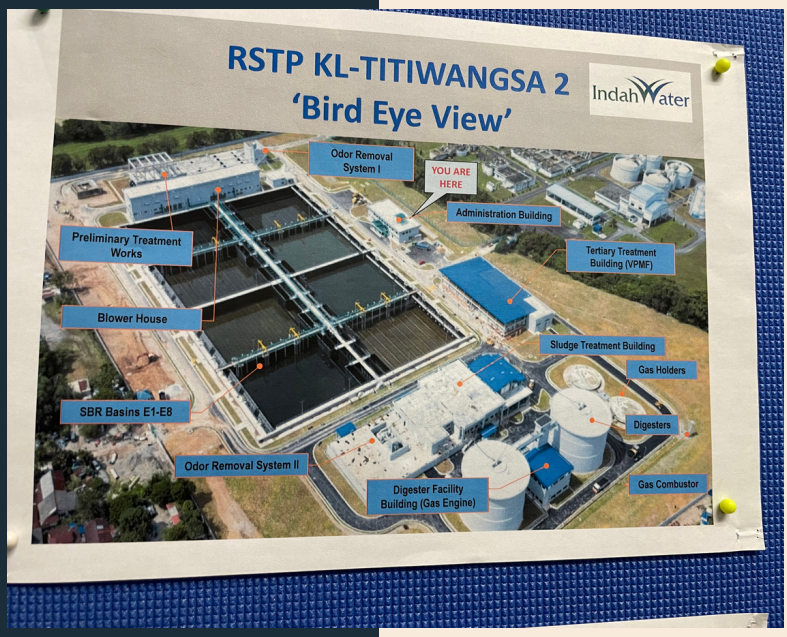


A visit to Indah Water Konsortium Sdn Bhd

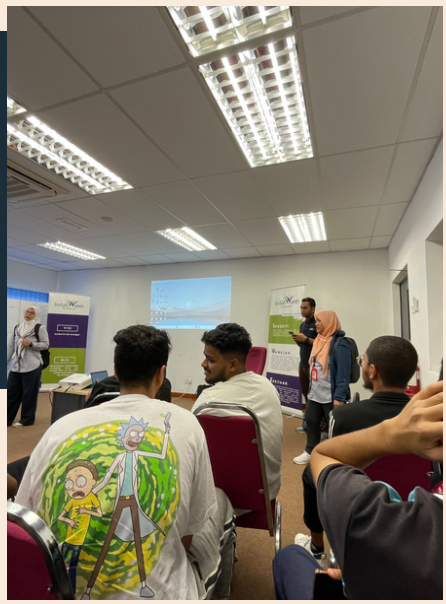
January 3rd, 2023

On January 3rd, 2023, a visit to view the Indah Water Consortium was arranged for the subject titled Technology and Information Systems by UTM. There were around 45 students accompanied by two lecturers. The students were made aware of the rules and regulations beforehand. The facility is situated at Titiwangsa, Kuala Lumpur. Two buses were arranged for the visit.

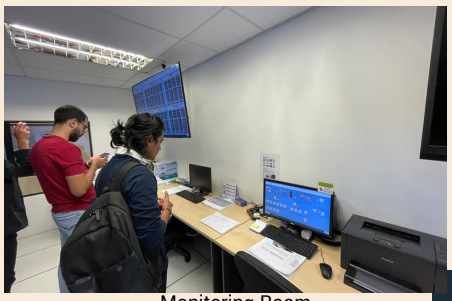
INDUSTRY VISIT

Indah Water Konsortium (IWK) Sdn Bhd is a National sewerage company in Malaysia, they have been entrusted with the tasks of developing and maintaining a modern and efficient sewerage system for all Malaysians. The company demonstrated how the software and hardware work in harmony in order to recycle the sewerage water. This provided insights into the job scopes outside of traditional software engineering.

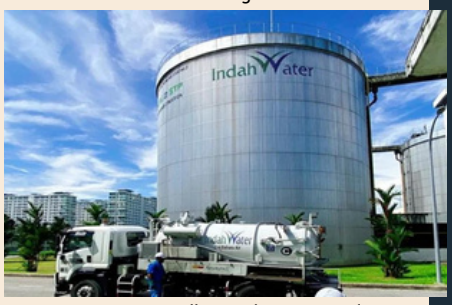
Upon reaching the facility at 2:00pm, the students were briefed by the lecturers as well as the staff working there. A presentation and overview of how the facility operates were provided to the students followed by a guided tour. The students were shown around the monitoring room, the SBR facility, the Motor Control centre, the data centre and the Supervisory Control and Data Acquisition (SCADA) system room.



Briefing and presentation by the lecturers and staff



Monitoring Room



Recycling and storage unit

The staff explained how the process works. Software engineers program the system to operate the monitoring panel, coding buttons that control the pumping process and sensors. The panels, comprising a mix of software and hardware, collect data and manage pumps, while inverters identify errors and transmit them to the Motor Control Center (MCC), which in turn relays the information to the Supervisory Control and Data Acquisition (SCADA) system where all the screening panels are situated.

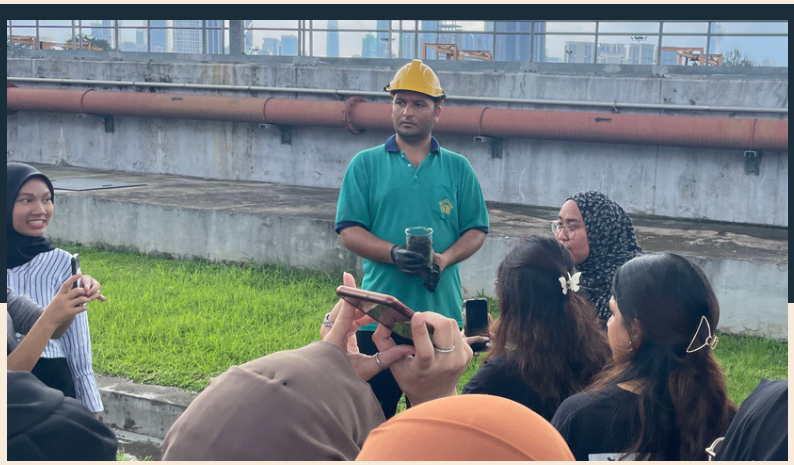
MARWAN SAMEH RAAFAT ELHENNAWY (A22MJ3007)
SMH ABRAR AL RASHID (A22MJ4011)
HUSSEIN NAZIF AR RIFAI(A22MJ4010)
HESAM ZOVEIDAVIAN POOR (A22MJ4009)

Tour of the facility

January 3rd, 2023

After the screening, the students were taken to the wastewater treatment process. In the wastewater treatment process, the Sequential Batch Reactor (SBR) is employed to remove sand and separate oil and surface particles. After utilizing the SBR to harvest the top surface water, the treated effluent proceeds to the tertiary treatment building for the final removal of polished suspended solids.

SBR Tank which separates oil and water



A staff demonstrating the recycled fertilizer

The visit underscored the diverse opportunities available for software engineering graduates beyond the conventional path of app development. It demonstrated that their knowledge and expertise can be effectively applied in various industries, such as the water treatment sector, offering promising avenues for both employment and innovation

All things considered, the tour gave rise to a strong sense of optimism, demonstrating how the students can apply the fundamentals of software engineering to address environmental issues and build a more sustainable and resource-efficient society through commitment and creative problem-solving. They were also demonstrated how diverse the field of software engineering is and how the job scope can differ from traditional software engineering roles.

A data centre storing and maintaining core functions

Software engineers design and implement automation scripts or tools to manage and deploy infrastructure resources within the data center. They use monitoring tools and implement performance optimization strategies to ensure the efficient use of resources of the facility.

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