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"AMPHIBIOUS RESILIENT HOUSE" – A USM INNOVATION FOR FLOOD DISASTERS

PENANG, 17 February 2016 – The School of Housing, Building and Planning (HBP) has put the Universiti Sains Malaysia (USM) name in the limelight recently with the winning entries of its students in different categories in the Autodesk Malaysia Design Competition (AMDC), organised together between Autodesk, the Ministry of Education Malaysia and Prestariang.

The three categories contested in the competition were on Architecture, Manufacturing and Animation with entries coming from various educational institutions in Malaysia, resulting in USM emerging victorious and winning first place in two advanced categories, namely Architecture and Manufacturing.

Winner of the Architecture category, Muhammad Nazli through his winning entry entitled "Amphibious Resilient House" said that, the success has given him and his friends the vim and vigour to continue contributing to USM.

"For the Architecture category, we were asked to design a habitat which has a size of not more than 40 metres square and involving the 'smart design' concept. For this year's design, AMDC has asked us to design a habitat/house which can accommodate the homeless and senior citizens among others," said the student, who is in his second year of studies.

Added Nazli, the inspiration for their idea in designing the house, was from the situation commonly found in Malaysia, which is in Kelantan where every year floods would occur, resulting in heavy damage. From that perspective, Nazli thought of a design which could bring relief to the people as they try to save themselves from the flood water.

The "Amphibious Resilient House" (floating house) is capable of being buoyant and is built from recycled materials. This concept has previously been introduced and is truly practical during the occurrences of floods.

"By using acontainer and the pontoon system from recycled materials in order to be buoyant, the house would float whenever the water level starts to rise, befitting its name which reflects the functional aspect of the house, which could 'survive' on land and water," he explained.

He further explained that, his studies at HBP has taught him and his friends to incorporate any element of sustainability in their designs, whether in the materials, costs or architectural lifespan, as well as in the need to be practical and being user-friendly.

In incorporating the 'green' concept, integrated solar panels are also placed on the roof of the house to promote energy efficiency, together with the installation of large windows to provide better cooling effects to the inhabitants.

"There are 3 types of houses which are recommended, firstly being Type A - a family house for 4 and having 2 queen-size beds focusing on compact living. Type B meanwhile can house 5 people and with 1 queen-size and 3 single beds,incorporating the concept of compact living, and finally Type C which is a community unit housing the homeless/old/retired with 2 rooms and 6 single beds, also incorporating the concept of compact living.

"Compact living"concept incorporated here relates to the idea of economising the confines of each area, allowing it to be multifunctional. For example, the living room could be turned into a bedroom as the beds can be moved around," he added.

For his winning entry, Nazli received a cash prize of RM2,000 and a trip to Autodesk Panorama 2016, while the second place winner for this category was also won by a USM student, Muhamad Azriwan Ramli with his entry "Amphibious Temporary House" and with the third prize awarded to a student from Universiti Putra Malaysia (UPM).

67 students from HBP entered the competition in various categories, and under the guidance of their academic advisor who lectures at HBP, Prof. Dr. Ahmad Sanusi Hassan.

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