ECO 3D Printing

Omari, Mohammad (School: Modern Systems School)

Plastic is an essential part of our daily life and because of its unique properties, it is involved in different industries and consumed by everyday activities and has a lot of benefits that makes it the ideal material. Furthermore, plastic has a bad impact on the environment as it is considered to be a non-degradable material. 3D printing is a modern technology and it refers to processes in which material is joined or solidified under computer control to create a three-dimensional object. The materials used are often thermoplastic polymers in which it is considered expensive to buy. The purpose of the project is to reduce the disposal of plastic bottles among individuals by creating a use for consumed and empty bottles. The procedures for this research started by studying the Impacts of plastic on the environment, manufacturers' attitude towards plastic pollution, 3D printing market value, analyzing current solutions, attempting to modify the 3D printer to extrude plastic bottles, cutting plastic bottles into 3mm consistent plastic tapes and modifying the 3D printer extruder to adapt with the linear shape of the input plastic. This project is important for both environment and people as it encourages individuals to reduce their disposal of plastic bottles, and reducing the cost of filaments on 3D printer owners.

Awards Won: