Hosam Abdeltawab **Quiz 8** **October 24, 2017**

1. **Creating throwaway prototypes is a costly approach for selection of design concepts. What aspects do you need to consider when evaluating the use of the approach?**

   - We should consider the following:

     - Does the project incorporate emerging technologies?
     - Is the technology new in the company?
     - Are there certain drivers, particularly quality attributes, whose satisfaction using the selected technology presents risks (i.e., it is not understood if they can be satisfied)?
     - Is there a lack of trusted information, internal or external, that provides some degree of certainty that the selected technology will be useful to satisfy the project drivers?
     - Are there configuration options associated with the technology that need to be tested or understood?
     - Is it unclear whether the selected technology can be integrated with other technologies that are used in the project?

2. **What are the three categories of architecture structure?**
   - Module Structure
   - Component-and-connector structures
   - Allocation structures.

3. **How interfaces are defined?**
   - Interfaces are the externally visible properties of elements that establish a contractual specification that allows elements to collaborate and exchange information. There are two categories of interfaces: external and internal. An interface can be defined by considering interactions between the external systems and your system and seeing them as elements of a bigger structure.

4. **What is the content of architecture backlog?**
   - Basically, we need to create a list of the pending actions that still need to be performed as part of the architecture design process. For example:

     - Creation of a prototype to test a particular technology or to address a specific quality attribute risk
     - Exploration and understanding of existing assets (possibly requiring reverse engineering)
     - Issues uncovered in a review of the design
     - Review of a partial design that was performed on a previous iteration