Faculty of Engineering Computer and Communication Computer Science Department

Cloud Computing Project   Academic Year – 2023/2024

Introduction:
One of the most effective ways to acquire skills is to apply it and the best way is to apply it in a project. Cloud Computing applications are becoming one of the most widespread across various technology fields, and applications.

When it comes to cloud computing focusing on a specific project objective will be beneficial for students and will allow them to grow and enhance knowledge and abilities in their academic and professional careers.

Subject:
It is requested from students to use existing software web application previously developed or from any online source which is needed to be deployed on Azure while using most of what was already learned and acquired.

Following Resources needs to be created in Azure Cloud:
  a) Resource-Group: <name of the student>-RG containing following resources:
  b) Azure Virtual Machine with DS2_V2 size: it can be either Windows or Linux Machine acting as a selfhosted agent that needs to be connected to Azure DevOps
  c) SQL Server and SQL Database having basic 5 DTU as specs
  d) Azure Function: at least one function app having at least 2 functions with different types of triggers
  e) Azure WebApp: Needed to have the web application on it
  f) KeyVault: All connection strings should reside in KeyVault
  g) Storage Account

The code should be push under GIT Repository "Azure Repos" in Azure DevOps.
Inside **Azure Boards** you need to create tasks and include in each of them what is planned to be achieved.
Azure **Build Pipelines** and **Release** which should act as CI/CD pipelines with auto trigger enabled.
Classic pipelines or Yaml based pipelines are both accepted.
Using Docker ACR is additional and welcomed.

Rules:
  a) This project can only be done **individually**.
  b) Using your own Azure Portal Subscription is preferred either by claiming a student offer or by using a debit card which will provide free 200$ credits for one month.
  c) VM must be turned off when not used to not consume all the available credits.
  d) The deadline for submitting report about the project is by **6 DEC** 2023
  e) Report should only be submitted by email and in PDF Format
  f) Defending your project date is **9 December** at the faculty. During the project defense, you will briefly present your project and you will be asked multiple questions about it.