**Image Management System**

**SOLUTION DESIGN DOCUMENT**

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1. **Introduction**
   1. **Purpose**

* This Project is to download image from AWS S3 bucket and save image pixel information to MySQL.
* This design document is used to implement the project.

1. **Sulution**
   1. **Solution overview**

The system will have the following components:

* Service: provide a list of methods to communicate with MySQL database. Use Entity framework.
* Connection: get a list of image files or download any file in AWS S3 bucket. Use AWS SDK for .NET.
* Image: contains method to manipulate with image.
  1. **Design pattern**
* Repository pattern: to provides simplified access to data stored of some kinds(SQL, MySQL, File…).

1. **Technical Requirements**
   1. **Software:**

* Database(MySQL).
* Development tools.
* 3rd party(Entity framework, AWS SDK).
  1. **Hardware:**
* If applicable, describe any minimum hardware requirements for the application.
  1. **Capacity:**
* Describe current and projected CPU, memory and disk space usage for the application.
  1. **Solution structure:**
* Database
* Repositoty.
* Service

1. **Database Design**
   1. **Data description**

MySQL database and Entity framework to communicate with database.

* 1. **Database structure**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table** | **Field** | **Type** | **Not null** | **Default** |
| ImageFile | **FileId** | Int | Yes |  |
| FileName | varchar(500) | Yes |  |
| FileSize | Int | Yes |  |
| Pixels | **FileId** | int | Yes |  |
| **PixelX** | int | Yes |  |
| **PixelY** | int | Yes |  |
| PixelR | int | Yes |  |
| PixelG | int | Yes |  |
| PixelB | int | Yes |  |