**PROBLEM**:

Palladium Health Centre is in the process of automating her operations. The automation will be done in phases, with the first phase being Records department (Process Owner). The proposed patient data elements as per the department, include; bio data, location (county, subcounty, ward and village), contact (cell phone, email and alternative cell number), enrollment (enrollment date, enrollment number) and next of kin.

On successful completion, the records department should run a central patient registry where they can search, add, edit, delete and view patients in the database. This design should also provide an elegant solution of transitioning a patient’s next of kin to a patient without necessarily recapturing their bio details (re-use of existing data).

**Task (50 marks).**

Design and develop a simple web (preferred) or a stand-alone application that is robust, scalable and efficient focusing on the software development best practices in the market. The developed application should adequately address the records department’s needs as explained.

**Additional requirements:**

1. Clear separation of patients and non-patients within the database.
2. Capability of updating either location/contacts/next of kin without necessarily updating patient bio.
3. Implementation of a logical delete.
4. Standard naming for variables, database and tables within the entire system.
5. Audit trail

AuditT on Users:

delimiter //

CREATE TRIGGER `palladiumke`.`user\_audit` BEFORE

UPDATE

  ON `palladiumke`.`palladium\_users` FOR EACH ROW BEGIN

INSERT INTO

  `palladiumke`.`palladium\_users\_audit`

VALUES

  (

    OLD.UserID,

    OLD.FirstName,

    OLD.LastName,

    OLD.MiddleName,

    OLD.DateOfBirth,

    OLD.Gender,

    OLD.Age,

    OLD.MaritalStatus,

    OLD.Height,

    OLD.Weight,

    OLD.UserType,

    OLD.DateEnrolled,

    OLD.IsDisabled,

    OLD.IsDeleted,

    OLD.DeletedOn

  );

  END

  //

  delimiter;

**Required Approach:**

1. Use programming language of your choice.
2. Provide clear database diagram showcasing table relationships
3. Provide a query that retrieves the following:
   * List of next of kin for a patient's

* SELECT palladium\_nextofkin.EntryID,palladium\_users.`UserID`, CONCAT(`FirstName`,' ', `LastName`, ' ', `MiddleName`) as Name,`NokName`,`NokEmail`,`NokAddress`,`Relationship` FROM palladium\_users,palladium\_nextofkin WHERE palladium\_users.UserID = palladium\_nextofkin.UserID AND palladium\_users.UserType = 1 AND palladium\_nextofkin.IsDisabled = 0 AND palladium\_nextofkin.IsDeleted = 0 AND palladium\_nextofkin. UserID = ‘given\_patient\_enroll\_no’ GROUP BY palladium\_ nextofkin.EntryID
  + List of deleted patients showing date of action
* SELECT palladium\_users.`UserID`, CONCAT(`FirstName`,' ', `LastName`, ' ', `MiddleName`) as Name, `DateOfBirth`, `Gender`, `Age`, `MaritalStatus`, `Height`, `Weight`, `DeletedOn` FROM `palladium\_users` WHERE UserType = 1 AND palladium\_users.IsDisabled = 0 AND palladium\_users.IsDeleted = 1
  + Patients who are below 15 years old
* SELECT palladium\_users.`UserID`, CONCAT(`FirstName`,' ', `LastName`, ' ', `MiddleName`) as Name, `DateOfBirth`, `Gender`, `Age`, `MaritalStatus`, `Height`, `Weight`, `DeletedOn` FROM `palladium\_users` WHERE UserType = 1 AND palladium\_users.IsDisabled = 0 AND palladium\_users.IsDeleted = 0 AND palladium\_users.Age < 15

1. Implement at least one (1) theming framework. – **Express JS templating engine**
2. Implement at least one (1) JavaScript framework. - **Node.js**
3. Implement at least one (1) data display/grid plugin – **DataTables/bootstrap**
4. Implementation of an API is not mandatory but will attract bonus marks.
5. Implementation of a programming pattern is not mandatory but will attract bonus marks - **Factory (create-export approach, Request-Response approach)**
6. Documentation
   * + **Data dictionary**
     + how to run the application
     + minimum requirements
     + the dependencies

Submission of completed work:

1. Fork the project at <https://github.com/palladiumkenya/patientManegementInterviewTask.git>
2. Complete the task with clear commits
3. Send pull request when done. This should be done not later than 0800hrs on 15th June 2018