**Draft of the Idea and Basic Information**

1. **Name of the application**   
     
   1.1 E-Gov   
   1.2 Health System

1.3 Hospital

1.4 Човек цял живот учи и цял живот бачка!! – in the Layout!!! Done

1. **Models** : Inherits BaseDeletableModel<T> for the checks

– Id is Guid !? or BaseModel that creates the Ids

* Hospital – Id, Name , Address, List<Doctor> , List<Patient>, List<Room> , List<Department>, Type??, List<Nurse>, List<Personnel>
* Clinic – Id, Name , Address, List<Doctor> , List<Patient>, List<Room>
* Emergency – Id, Hospital hospital , List<Doctor>, List<Patient>, List<Nurse>, List<Driver>
* Department – Id, Name (Oncology, Pediatric, Surgery, Traumatology, etc), List<Manager who is a person >
* Pharmacy – Id, Name, Address one to one
* Doctor – Id , Name, List<Specialty> , List <Patient>, List<Hospital>
* Nurse – Id, Name,
* Driver – Id , Name, List<Category>, List<Vehicle>, scan of driving license
* Vehicle – Id, Make, Model (selection ) type, carplate , capacity , fueltype(petrol, diesel , hybrid, electric), distance ++
* Category – Id, Letter … ??
* Address(can be null? Or default No Address)
* City – Id, Name, Country one to one
* Country – Id, Name, List<City>, Country Code (2CapitalLetters)
* Medicine – Id, Name, text with description(text), Type (??? Homeopathy, no prescription, etc )
* Prescription – Id, List<Medicine>
* Room – Id, Capacity, Count of beds = Capacity (int), List<Bed> If not full… List<Patient> (see how we make the rooms full )
* Bed – Id, Room room – one-to-one
* Patient – Id, Name, List<Diagnose>, List<IEntityHealth??>
* Diagnose – List<Patient>
* Class with messages , constants
* Class with Exceptions – static class
* GitHub Clean Architecture details about distribution
* Guid class to create new Id for all classes

Controllers – for each page(Index, Login, Users, etc) we need a class name+ Controller

Views has the html stuff

([CallerMemberName] string viewname = null)!!!!!

Wwwroot has the css files

HttpClient and FileStream classes have async and await methods

View -> Tweets -> Create.cshtml displays when the Controller -> TweetController says return this.View(); …

ViewModel is in Models Folder , not in View Folder/Project

* 1. **Interfaces**- IEntity (Hospital, Pharmacy, Clinic, School, Police station, FireDept ) – Id, Name, Address

- IMinistry (Health, Defense, MOI, MOE, Education, Justice, Environment, Finance/Tax/ Social security, Agriculture)

- IPerson(Id, Name, Age, ID )

-IPosition (Patient, Doctor, Administration(Secretary, Purchase/ Procurement), IT, Janitor, Guard, Nurse, Driver, HR, Minister, Co-Minister, Deputy-Minister, Legal etc )

- IAddress (City, Country, street, etc or text )

-IVehicle – Car, Bus, Truck, etc

-IDepartment – all kind of institutions

2.2 **Type of access**

- full access – CRUD - approve registrations – [Authorize attribute] + Roles

- view access - request registration , request orders, book visitation

- authentication form – log in page

- sha256 pass hash

- duplicated user cannot log in   
  
  
  
**3. Database**

- DTO with **automapper** that reads from the Database and sends to the Controller

Or View that shows the Index/ Initial page

Or service.ForumPosts<DTO> Service gets from the Controller (via automapper)????

**4.Functionality**

- switch language via i18n JavaScript

- PDF generation

- search with Elastic search or Full text index

- request a document – form , viewmodel

- pop up buttons – JS <script> - OnClick ?(10.03 1:20h)

- hidden buttons in HTML exist , check them

- Open Street Map

- votes and comments - Js

- add ons – commercials - see Niki’s lection on ???? presscenters.com?

- roles – table with users and table with roles !!! Areas

- clock, date - JS needed

- remaining time ?

- reporting ???? how to do and how to download and display it , counter for each class (patients served , etc ). Download reports via HTTP -> HTML lection page38

- statistics – count site visits , show date and time ? Redis DB (K,V). Site statistics via cookies . See Google analytics, Azure Application Insights

- people pictures , pictures at all – Link or varbinary in DB – Cloudinary from 01.03

- help windows

- accept cookies – set by default

- greeting (Good Morning, Good Evening, Good Afternoon), enjoy “day” - done

- request access ?/?

- commercials (robot.txt, ads.txt)

- report problem – csv format , return excel – feedback form

- exceptions

- where to host, how to upload ? – Azure lection

- login with FB, Google , etc - still pending

- pass verification – services do that via controller - done via StartUp

- maps where address ? – Geolocation – how does it work ?

- error message / under construction message

- upload pictures in Cloudinary - Stoyan1.03

- automated mails sent to users – SendGrid – how to set up ? still pending

- external systems integration –a hard task

- HTTPS – security – Let’s encrypt or via Azure ?

- address of the application / site – via Azure

- automapper!! Just set To<>, Mapfrom<> , IHaveCustomMappings

- feedback form – just text – user + text of the feedback, date

- Buttons send HTML requests

- HttpUtility.UrlDecode() – decodes the string

- bootstrap goes to wwroot folder! Materialize is an alternative of bootstrap

- include somehow machine learning – 18.07.2019 Niki Kostov’s video on this

- isDeleted – integrated

- GitHub, NikiIt , take the template , as it is done to be used

- Services are the ones communicating with the models that load the DB content

- Controller communicates with the Service

- upload videos(link maybe?!) , pictures, etc – link to videos , cloudinary for pictures

- search field on the whole site ? Elastic search

- sendGrid to send mails for registration – sends mails in the Controller!

-layout to have ifs to change the theme / css when logged and not ...

-every page has a Controller (domain/controller/method(action)). Its methods are the buttons - Actions

-every Controller class is related to a folder in Views with the Actions

- Controller takes the data , validates the data

- Views folder - page appearance, related to layout

- Home in View - Home page appearance - Index and Privacy for example in extension cshtml(Razor View), where HTML is . "@" sign starts the Csharp code here

- Layout – HTML where we insert the different views @RenderBody for example . Holds the header and footer of the page in HTML

- partial views, razor pages, razor views, \_Layout , etc

- Services change the data , no validation here, creates the user for example

Service hashes the password

* Logger of the things happening : when registered, when logging in , etc

Service has methods that do some stuff

* thankyouView to display the thanks page when registered , or redirect to Index?
* how to keep the user logged in – get the session in a file and load it ?

-StartUp seeds the database with the dummy data

**5.Legal stuff** – GDPR(done), link to law and legislation, privacy, trade marks, etc , Ombudsman link

**6.Testing of the solution** – Moq, Users , etc , testing integration,

IEntity or abstract class ?

-Id

-Name

-Address / Location

**Buildings – locations ?!**

Health: Enum?

* hospital
* emergency
* clinic
* pharmacy
* rehab

MOI :

* Police station
* Fire Dept
* Special Forces
* Intelligence

Justice :

* Court
* Jail

Tourism

* Hotel
* Guesthouse
* Beach
* Spa places

Transport

* Railway
* Airport
* Port
* Road
* Vehicle
* Water

Education :

* School
* Camp
* University
* College
* Play school
* Nursery

Military :

* Airforce base
* Navy/marine base
* Tank base
* Special forces

VehicleType : Enum?

* Electric
* Motor
* Military
* Aircrafts
* Marine
* Underground

Vehicle purpose : Enum?

* Ambulance
* Ship
* Uboat
* Cargo
* Construction
* Travel

Vehicle :

-Id

-TypeId

-PurposeId

- VIN

-Plate

- millage

- fuelTypeID

FuelType table: Enum?

- petrol,

-diesel ,

-electric,

-hybrid

-LPG

-CNG

- nuclear

-coal

- oil fuel

Table Country : one country has many cities – Enum?

* Id
* Name
* International code – 2 letters

Table City : one city has one country – Enum?

* Id
* Name
* CountryId

Table Address :

* Id
* cityId
* street
* area
* postal code

Ministry : enum?

* Education and Science
* Health
* Defense
* Culture
* Transport Information Technology and Communications
* Tourism
* Interior
* External Affairs
* Labor and Social Policy
* Environment and Water
* Youth and Sports
* Regional Development and Public Works
* Finance
* Energy
* Agriculture, Food and Forestry
* Economy

Interface IPerson:

* Id
* FirstName
* MiddleName
* LastName
* AddressId
* EGN/Personal number
* birthdate

Table Employee : IPerson

* RoleId
* Salary
* EntityId
* Managerid – see self referencing table in EF Core
* Picture link?

Table Roles: Enum?

* Doctor
* Secretary
* Nurse
* Janitor
* Guard
* Driver
* IT
* Purchases
* Accountant
* Lawyer
* IsManager flag Y/N – TL, Head of Department, Head of Division , Director of Company, Minister, Deputy ,
* Driver
* HR
* intern

Every entity / location belongs to a Ministry - Ministry ID ?

* link to ministry link? !
* Health : <https://www.mh.government.bg/bg/>
* - reflection to select the dropdown in districts

Reporting

* Total number of users
* Users registered the last 24h
* Patients count + last 24h
* Cars Count + km per month ?
* Hospital beds count available + occupied + last 24h change
* Doctors count
* Doctors by specialty
* Doctors by IEntity(place)
* Nurses count
* How to get the site visits?
* Available / occupied beds in one or all hospitals, or select several
* Patients with certain diagnose
* How many doctors per specialty we have

Mapping tables (Many-To-Many):

– DoctorEntity,

One-To-One :

- Doctor – Patient

main screen to list the Ministries buttons and links