



(One member of the group must submit this document before beginning of week 2 to supervisor)

Project Title: BHN Project

Description/Proposal (brief one or two paragraphs):

The BHN Project (Birth Healthcare Number) is a secure digital healthcare platform built under the domain mhcare.ca. It aims to solve the problem of fragmented medical records in Canada by assigning every citizen a unique BHN at birth. This BHN serves as a lifelong digital identifier that links to an encrypted cloud-based medical portfolio, containing medical history such as prescriptions, reports, hospital visits, and diagnoses.

Who Can Access It?

Only verified and authorized users can access a patient's records. This includes:

- Healthcare Providers

Access is protected using AWS Cognito-based authentication with role-based permissions.

How It Works – System Architecture

The project uses multiple AWS services to create a secure, scalable, and compliant platform:

- AWS Amplify: Hosts the frontend for BHN search
- AWS S3: Securely stores patient files in per-BHN folders
- AWS Cognito: Manages login and authentication for verified users
- Amazon EC2: Hosts a hospital portal (external interface)
- CloudFront + Route 53: For HTTPS, DNS, and CDN
- AWS Lambda/Node.js: Planned backend API for secure file access and logs

Why It Matters

- Removes paperwork and manual processes
- Allows faster emergency response with instant access
- Prevents test duplication
- Centralizes health history from birth to death
- Ensures privacy with full encryption and HIPAA-ready design

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