Assignment 1

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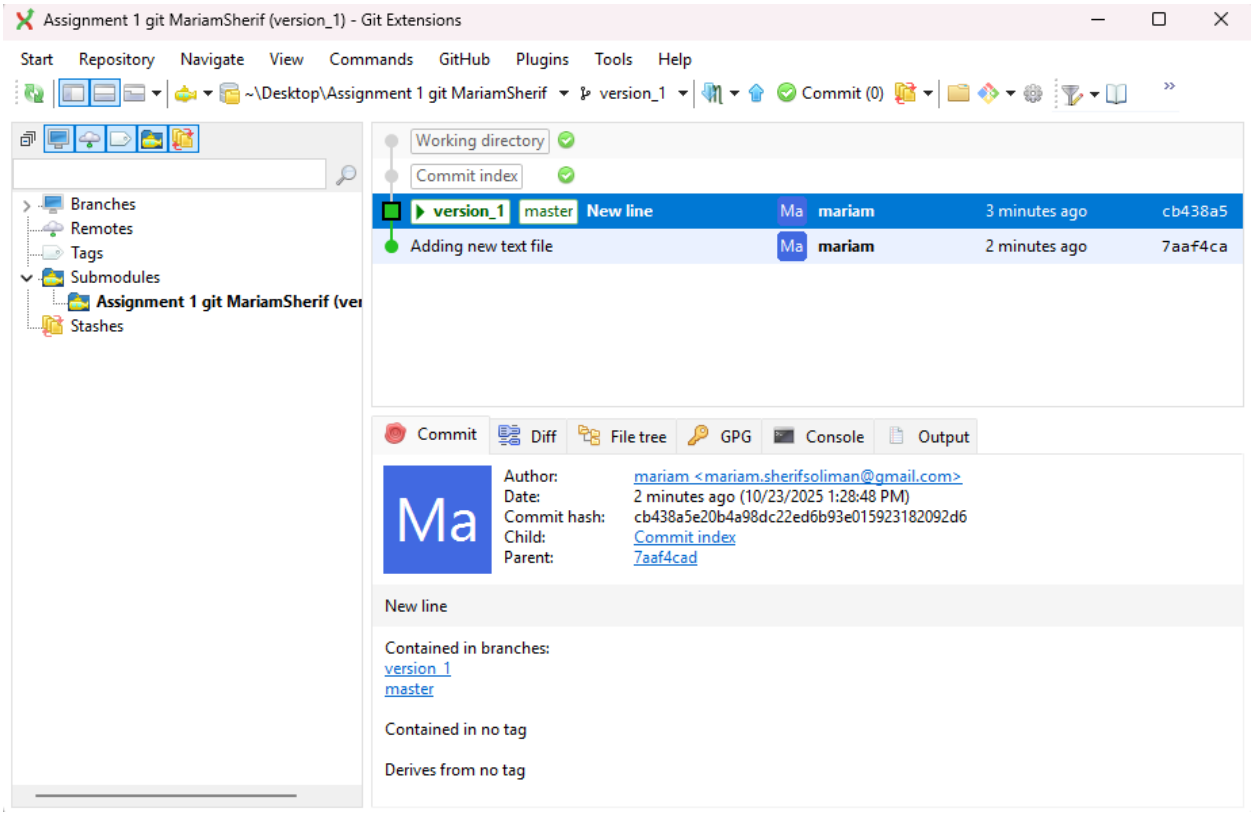
Course Code: CCAS 4.3

Question 1:


Assignment 1 git MariamSherif (version_1) - Git Extensions
Start
Repository
Navigate
View
Commands
GitHub
Plugins
Tools
Help
~\Desktop\Assignment 1 git MariamSherif
version_1
Commit (0)
Working directory
Commit index
Branches
Remotes
Tags
Submodules
Assignment 1 git MariamSherif (ver
Stashes
version_1
master
New line
Ma
mariam
3 minutes ago
cb438a5
Adding new text file
Ma
mariam
2 minutes ago
7aaf4ca
Commit
Diff
File tree
GPG
Console
Output
Ma
Author:
mariam <mariam.sherifsoliman@gmail.com>
Date:
2 minutes ago (10/23/2025 1:28:48 PM)
Commit hash:
cb438a5e20b4a98dc22ed6b93e015923182092d6
Child:
Commit index
Parent:
7aaf4cad
New line
Contained in branches:
version_1
master
Contained in no tag
Derives from no tag

Question 2:

Hospital System

1) 20 Functional requirements:

ID	Requirement	Category	Justification
FR1	The system must store patient personal data (name, ID, age, gender).	Must	for patient identification.
FR2	The system must record patient medical history.	Must	Doctors need access to past medicl history.
FR3	The system must manage doctor profiles (name, specialty, schedule).	Must	for appointment assignment
FR4	The system must allow scheduling of patient appointments.	Must	Main hospital operation
FR5	The system should send appointment reminders via email or SMS.	Should	to remind patients and improve efficiency.
FR6	The system must record prescribed medications for each visit.	Must	Ensures correct treatment follow-up.
FR7	The system should generate invoices for patient services.	Should	for billing and accounting.
FR8	The system must allow authorized staff to update medical records.	Must	keeps records accurate and current.
FR9	The system could allow online patient registration.	Could	For convenience
FR10	The system must support search by patient name or ID	Must	for fast and accurate data retrieval.
FR11	The system must back up patient records daily.	Must	Prevents data loss.
FR12	The system should support multi-user access (doctors, nurses, admins).	Should	Needed for concurrent work.
FR13	The system must log all database changes.	Must	Provides traceability and accountability.
FR14	The system could generate statistical reports (disease trends).	Could	Useful for doctors.
FR15	The system must store treatment and diagnosis details.	Must	Core medical record functionality.
FR16	The system must restrict access based on user roles.	Must	Protects sensitive patient information.
FR17	The system could allow printing of prescriptions.	Could	convenience

FR18	The system should integrate with lab results database.	Should	Helps in comprehensive patient assessment.
FR19	The system must support emergency patient registration.	Must	Needed in critical cases.
FR20	The system could provide analytics for doctor performance.	Could	Useful for patients to rate doctors and for administration insights.

2) 5 Non-Functional requirements:

ID	Requirement	Category	Justification
NFR1	The database must ensure confidentiality using encryption.	Must	Protects patient data privacy
NFR2	The system must respond within 2 seconds for common queries.	Should	For usability and performance.
NFR3	The system should support at least 5000 concurrent users.	Should	Handles hospital staff and patient load without being laggy.
NFR4	The database must provide backup and recovery options.	Must	Prevents permanent patient data loss.
NFR5	The system should have 99% uptime. (that 1% for maintenance other than that the system should be running 24/7)	Should	Needed for continuous hospital operations.