Chapter 6 : Analysis phase-UML system models

[Safe Haven Watch]

Name	Student ID	Email
Lamar Hussain Alharbi	445005711	uqu.edu.sa@s445005711
Jumana Khalid Alsaedi	445007196	uqu.edu.sa@s445007196
Ghala Marzouq Alsaedi	445007536	uqu.edu.sa@s445007536
Reem Ahmed AlShahrani	445000375	s445000375@uqu.edu.sa

Time meeting :

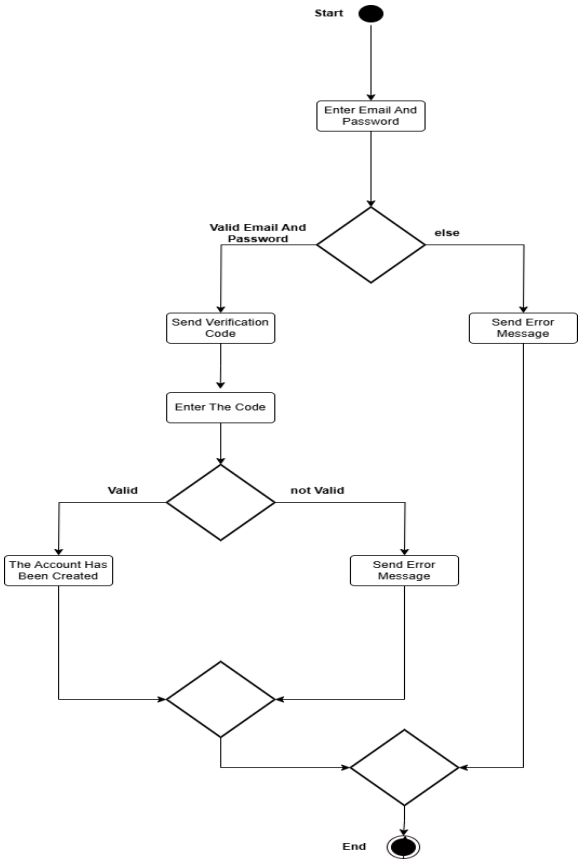
Name Of Group Member	Date And Time
Lamar-Jumana-Ghala-Reem	Thursday 13-3-2025 11:45 - 10:00
Lamar-Jumana-Ghala-Reem	Saturday 15-3-2025 10:20 – 9:00

Tasks:

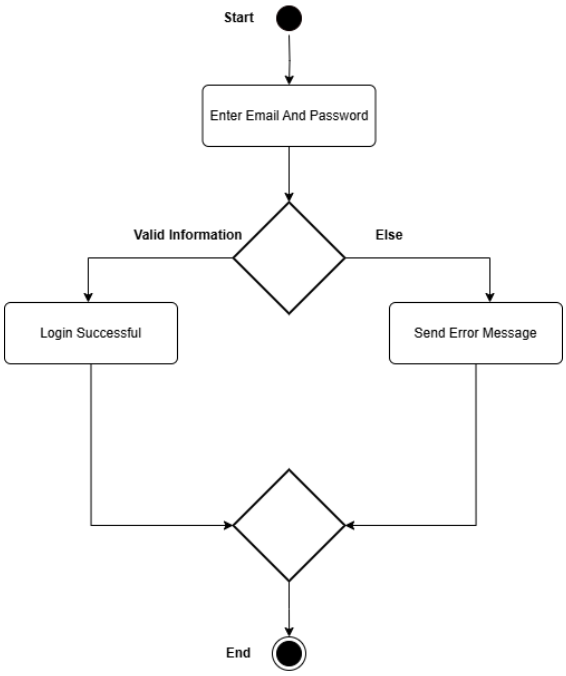
- Active diagram: Lamar Alharbi
- Active diagram: Reem AlShahrani
- Sequance diagram: Jumana Alsaedi
- Sequance diagram: Ghala Alsaedi

Active Digram :

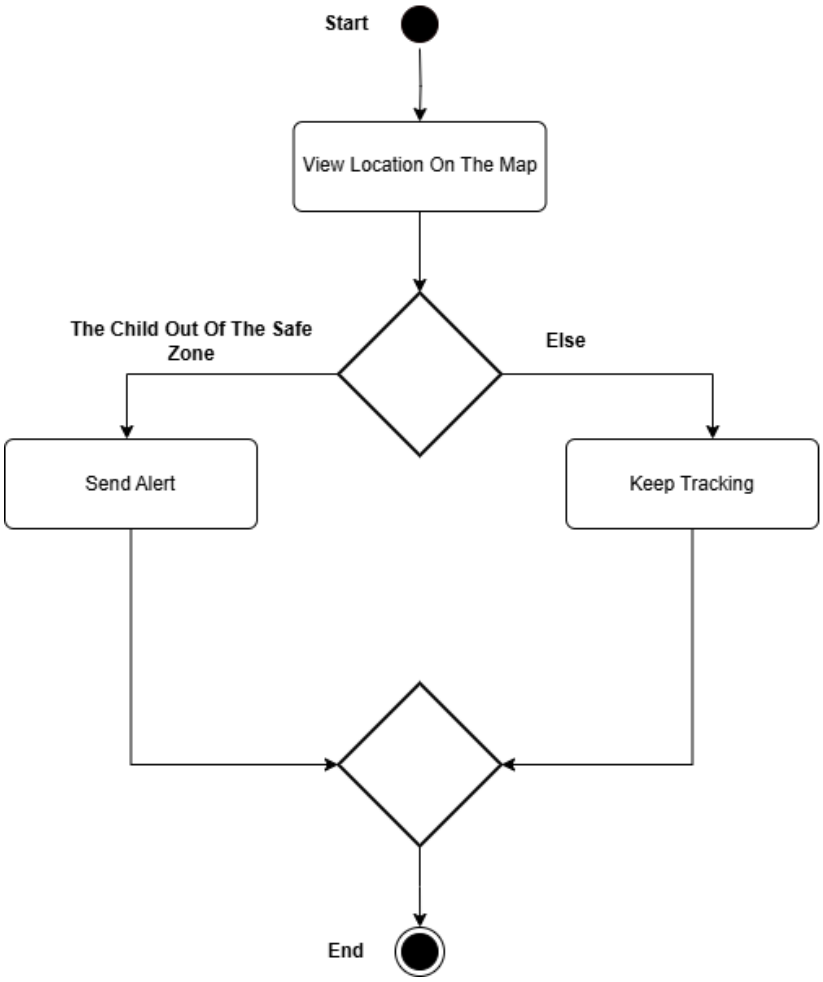
Create Account



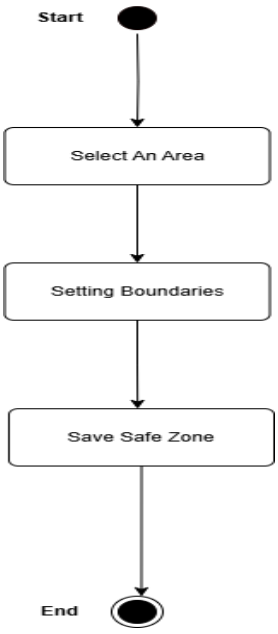
Login



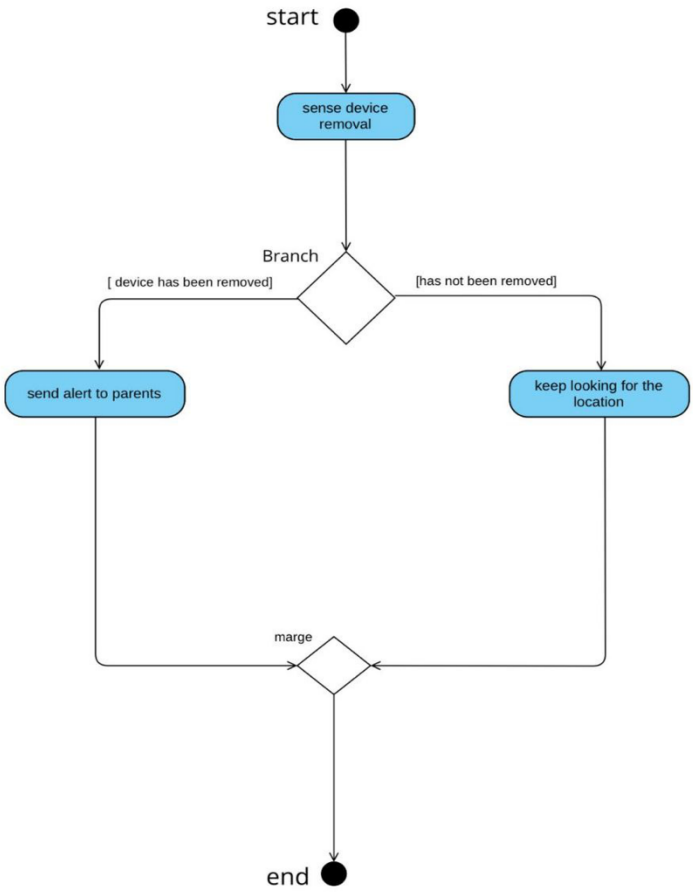
Real-time location tracking



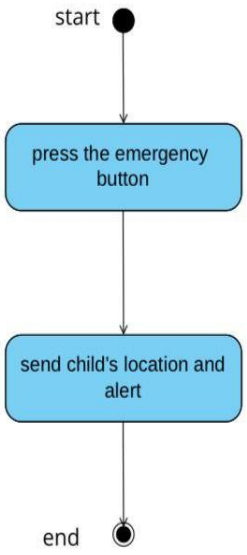
Define Safe Zones



Device tampering Alert

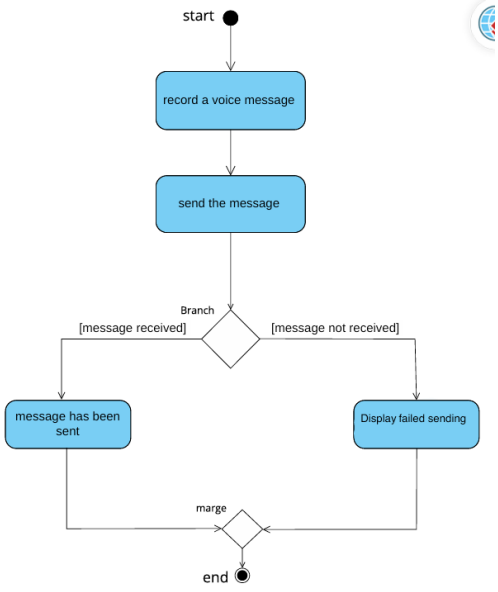


SOS Alert

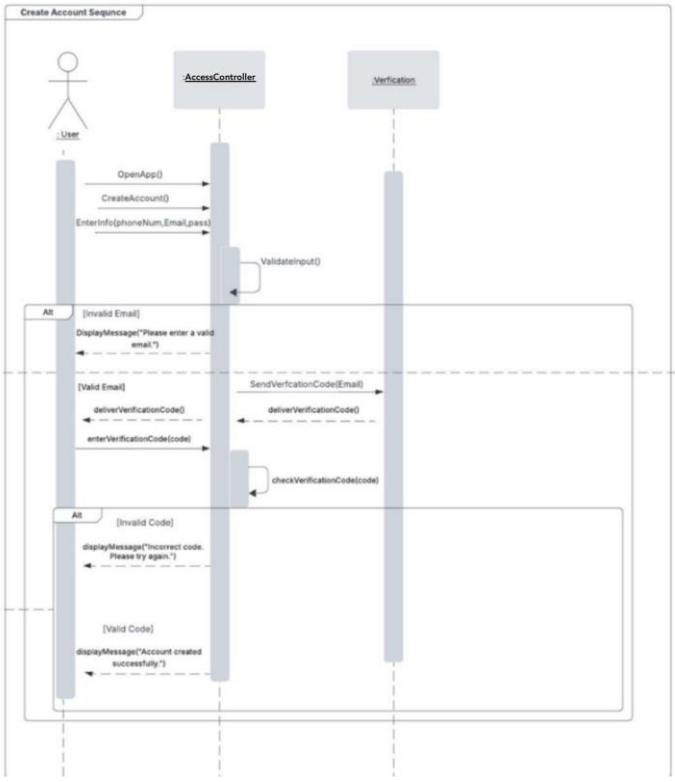


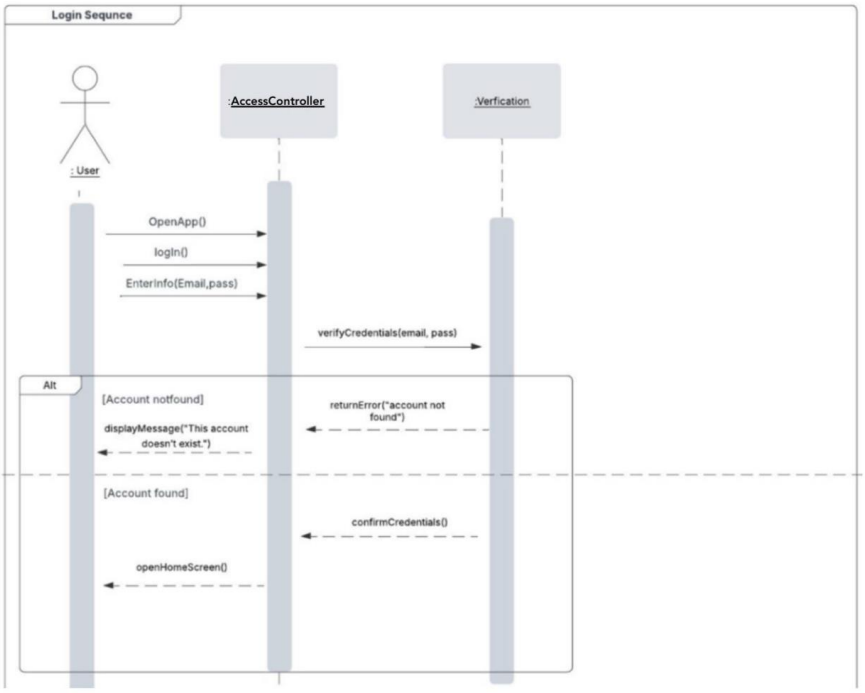
Report and update child state

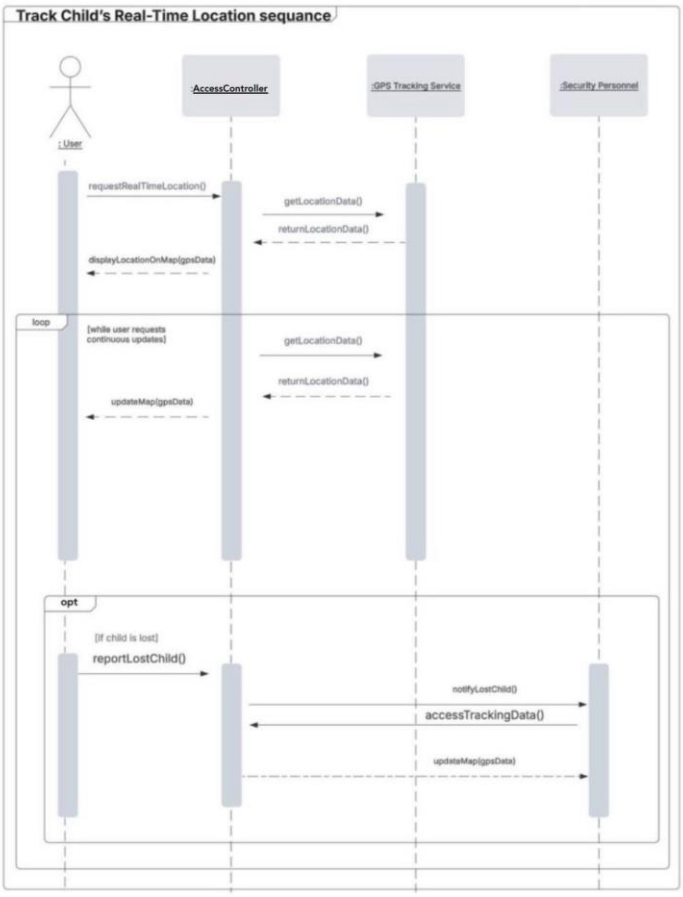
Voice messaging :

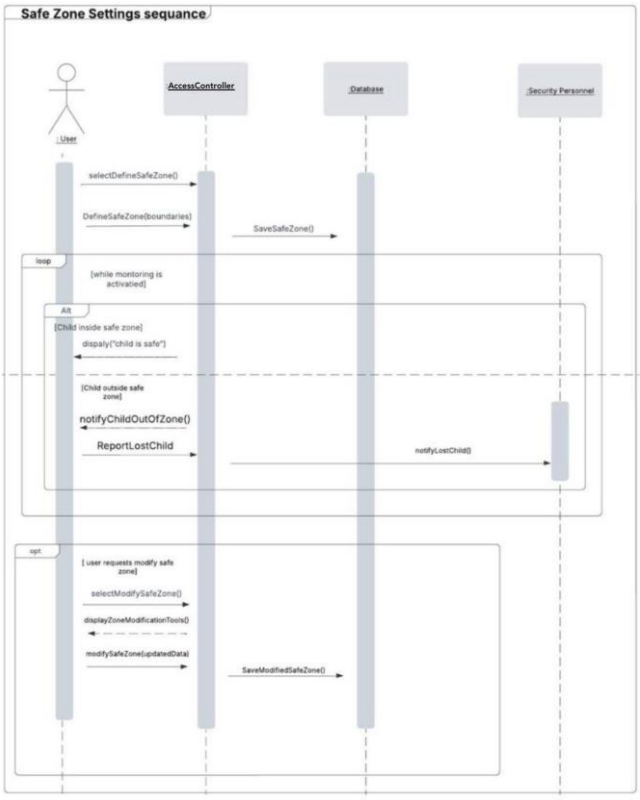


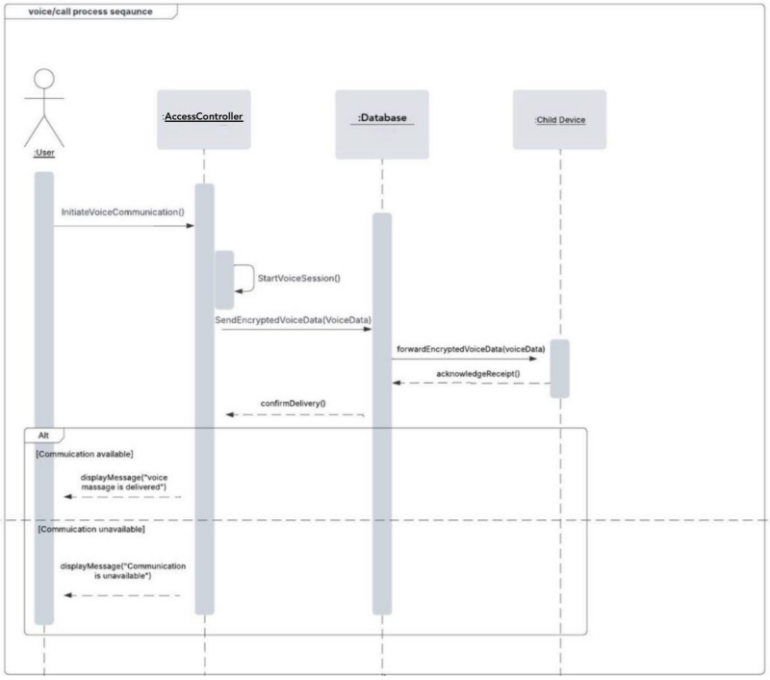
Sequence Diagram

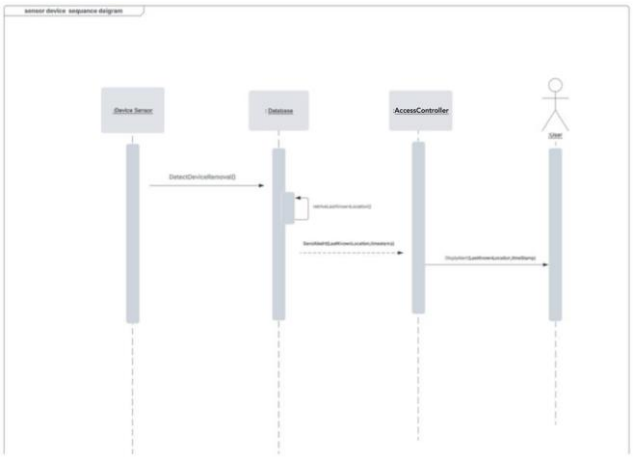

Create Account Sequnce
:AccessController
:Verfication
: User
OpenApp()
CreateAccount()
EnterInfo(phoneNum,Email,pass)
ValidateInput()
Alt
[Invalid Email]
DisplayMessage("Please enter a valid email.")
[Valid Email]
SendVerfcationCode(Email)
deliverVerificationCode()
deliverVerificationCode()
enterVerficationCode(code)
checkVerificationCode(code)
Alt
[Invalid Code]
displayMessage("Incorrect code. Please try again.")
[Valid Code]
displayMessage("Account created successfully.")

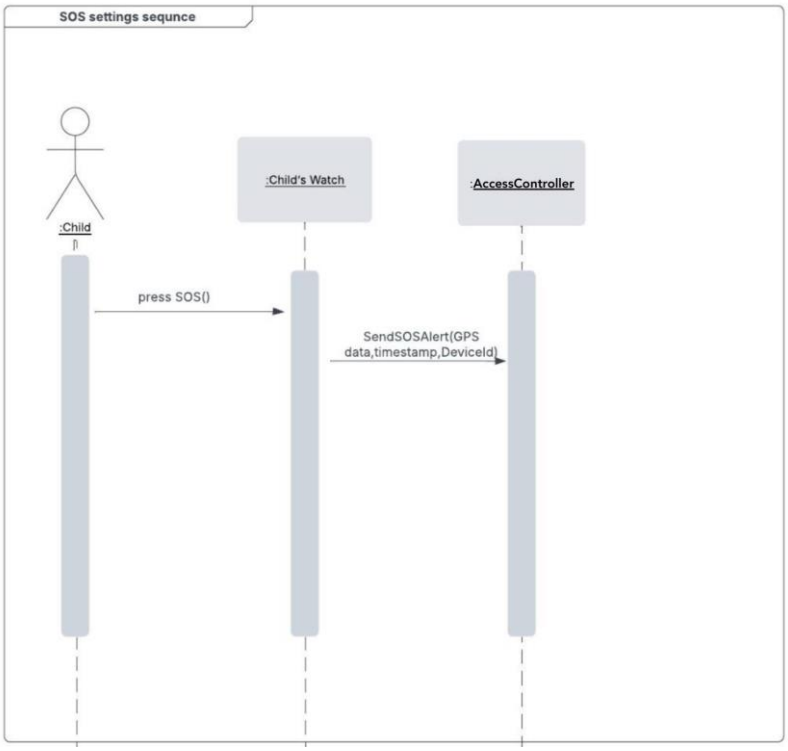

Login Sequnce
:AccessController
:Verfication
: User
OpenApp()
logIn()
EnterInfo(Email,pass)
verifyCredentials(email, pass)
Alt
[Account notfound]
returnError("account not found")
displayMessage("This account doesn't exist.")
[Account found]
confirmCredentials()
openHomeScreen()

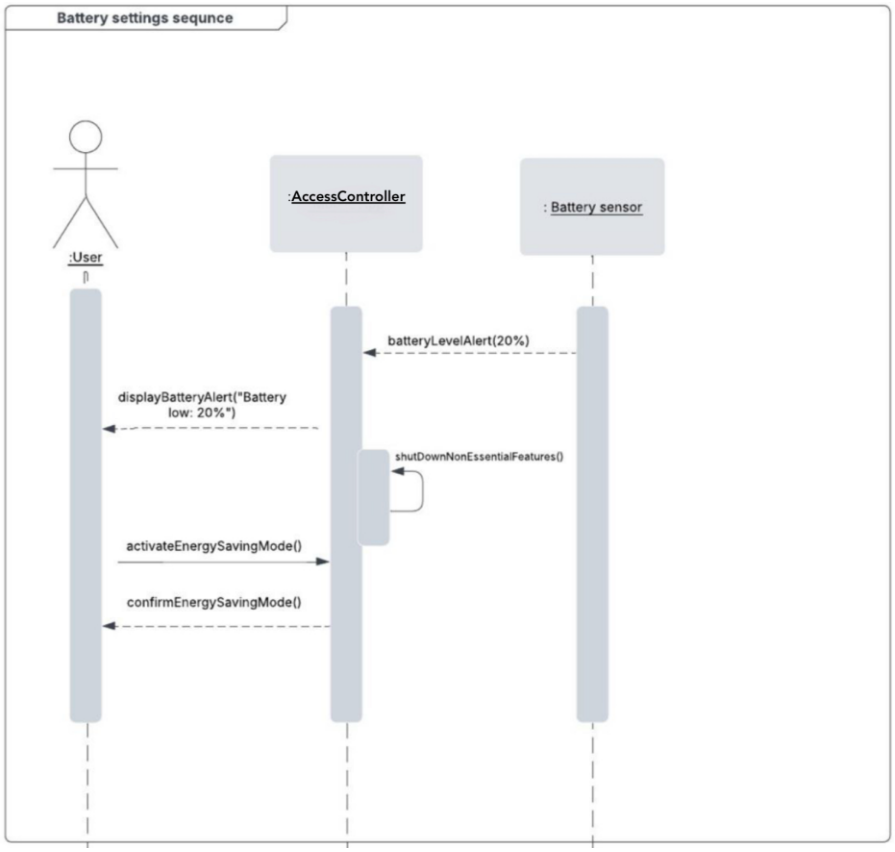

Track Child's Real-Time Location sequance
:AccessController
:GPS Tracking Service
:Security Personnel
: User
requestRealTimeLocation()
getLocationData()
returnLocationData()
displayLocationOnMap(gpsData)
loop
[while user requests continuous updates]
getLocationData()
returnLocationData()
updateMap(gpsData)
opt
[if child is lost]
reportLostChild()
notifyLostChild()
accessTrackingData()
updateMap(gpsData)


Safe Zone Settings sequance
:AccessController
:Database
:Security Personnel
User
selectDefineSafeZone()
DefineSafeZone(boundaries)
SaveSafeZone()
loop
[while montoring is activatied]
Alt
[Child inside safe zone]
dispaly("child is safe")
[Child outside safe zone]
notifyChildOutOfZone()
ReportLostChild
notifyLostChild()
opt
[user requests modify safe zone]
selectModifySafeZone()
displayZoneModificationTools()
modifySafeZone(updatedData)
SaveModifiedSafeZone()


voice/call process seqaunce
:User
:AccessController
:Database
:Child Device
InitiateVoiceCommunication()
StartVoiceSession()
SendEncryptedVoiceData(VoiceData)
forwardEncryptedVoiceData(voiceData)
acknowledgeReceipt()
confirmDelivery()
Alt
[Commuication available]
displayMessage("voice massage is delivered")
[Commuication unavailable]
displayMessage("Communication is unavailable")


sensor device sequance daigram
:Device Sensor
: Database
:AccessController
:User


SOS settings sequnce
:Child
:Child's Watch
:AccessController
press SOS()
SendSOSAlert(GPS data,timestamp,DeviceId)


Battery settings sequnce
:User
:AccessController
: Battery sensor
batteryLevelAlert(20%)
displayBatteryAlert("Battery low: 20%")
shutDownNonEssentialFeatures()
activateEnergySavingMode()
confirmEnergySavingMode()

Chapter 6 : Analysis phase-UML system models

[Safe Haven Watch]

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Lamar Hussain Alharbi	445005711	uqu.edu.sa@s445005711
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Ghala Marzouq Alsaedi	445007536	uqu.edu.sa@s445007536
Reem Ahmed AlShahrani	445000375	s445000375@uqu.edu.sa

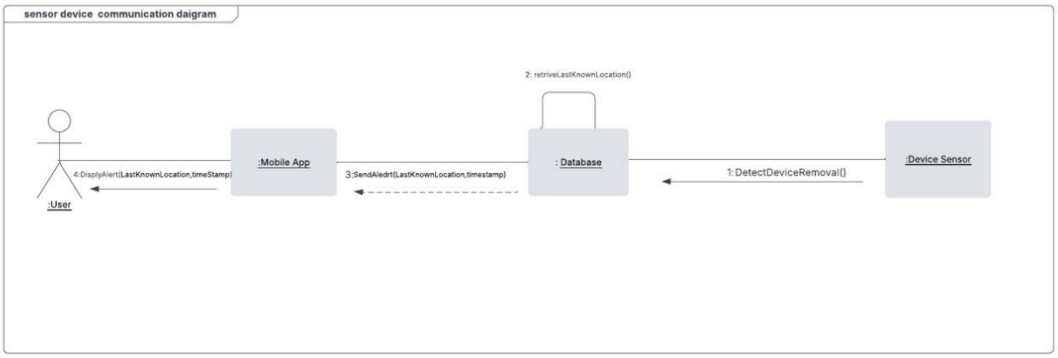
Time meeting :

Name Of Group Member	Date And Time
Lamar-Jumana-Ghala-Reem	Tuesday1-4-2025 11:45 - 10:00
Lamar-Jumana-Ghala-Reem	Saturday 5-4-2025 10:20 – 9:00

Tasks:

- Communication Diagram: Lamar Alharbi
- Communication Diagram: Reem AlShahrani
- Communication Diagram: Jumana Alsaedi
- Communication Diagram: Ghala Alsaedi

Communication Digram:



Chapter 6 : Analysis phase-UML system models

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Ghala Marzouq Alsaedi	445007536	uqu.edu.sa@s445007536
Reem Ahmed AlShahrani	445000375	s445000375@uqu.edu.sa

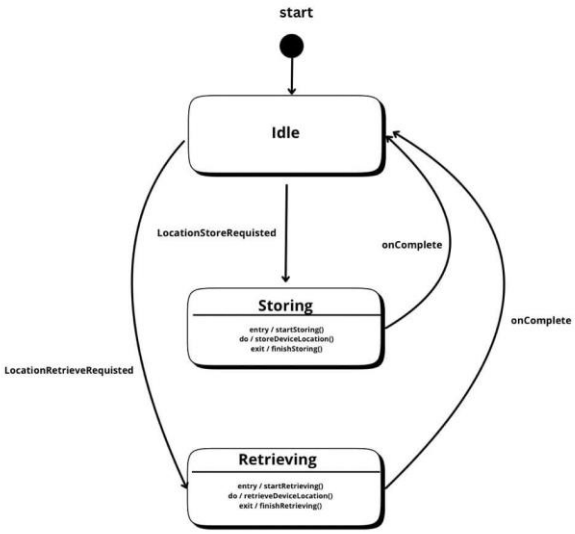
Time meeting :

Name Of Group Member	Date And Time
Lamar-Jumana-Ghala-Reem	Tuesday 8-4-2025 11:45 - 10:00
Lamar-Jumana-Ghala-Reem	Saturday 12-4-2025 10:20 – 9:00

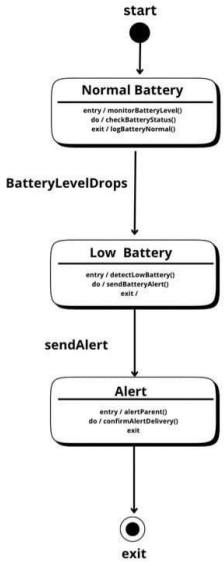
Tasks:

- Class and State Diagram: Lamar Alharbi
- Class and State Diagram: Reem AlShahrani
- Class and State Diagram: Jumana Alsaedi
- Class and State Diagram: Ghala Alsaedi

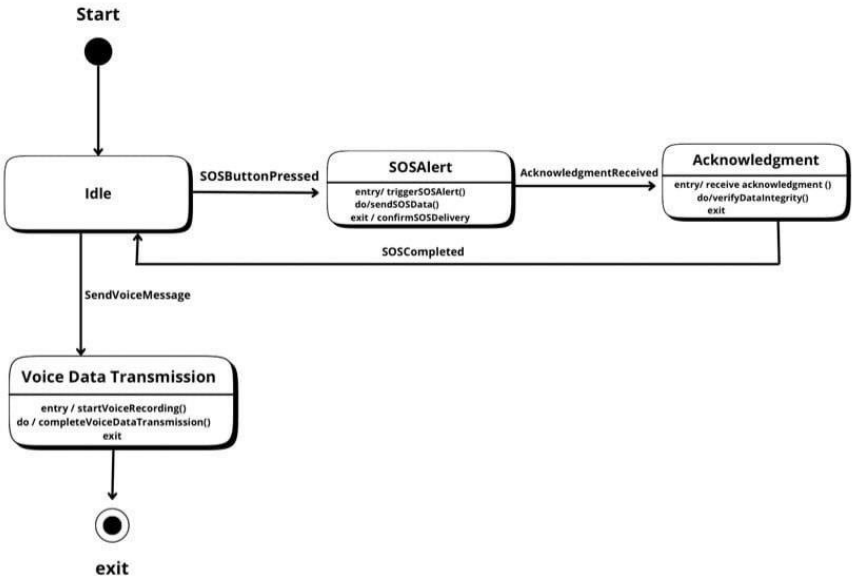
Database



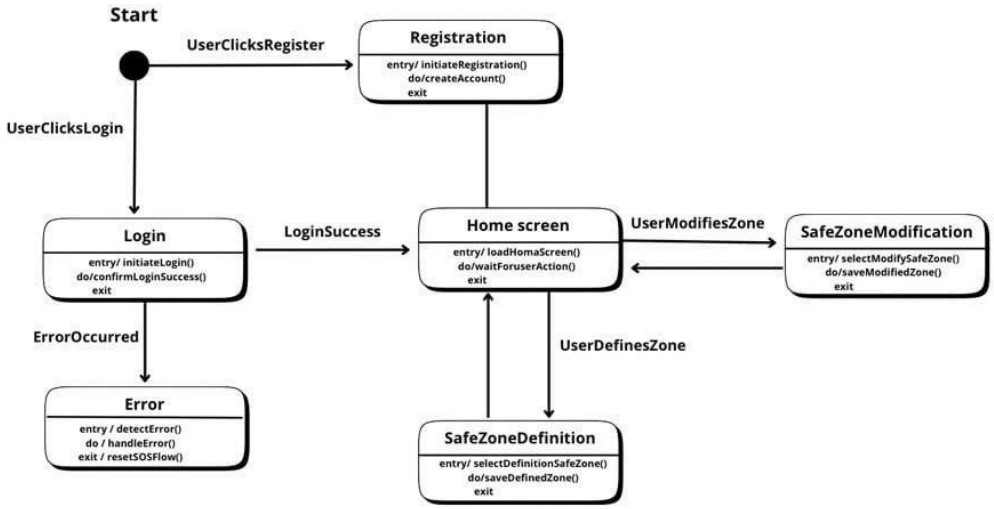
Battery



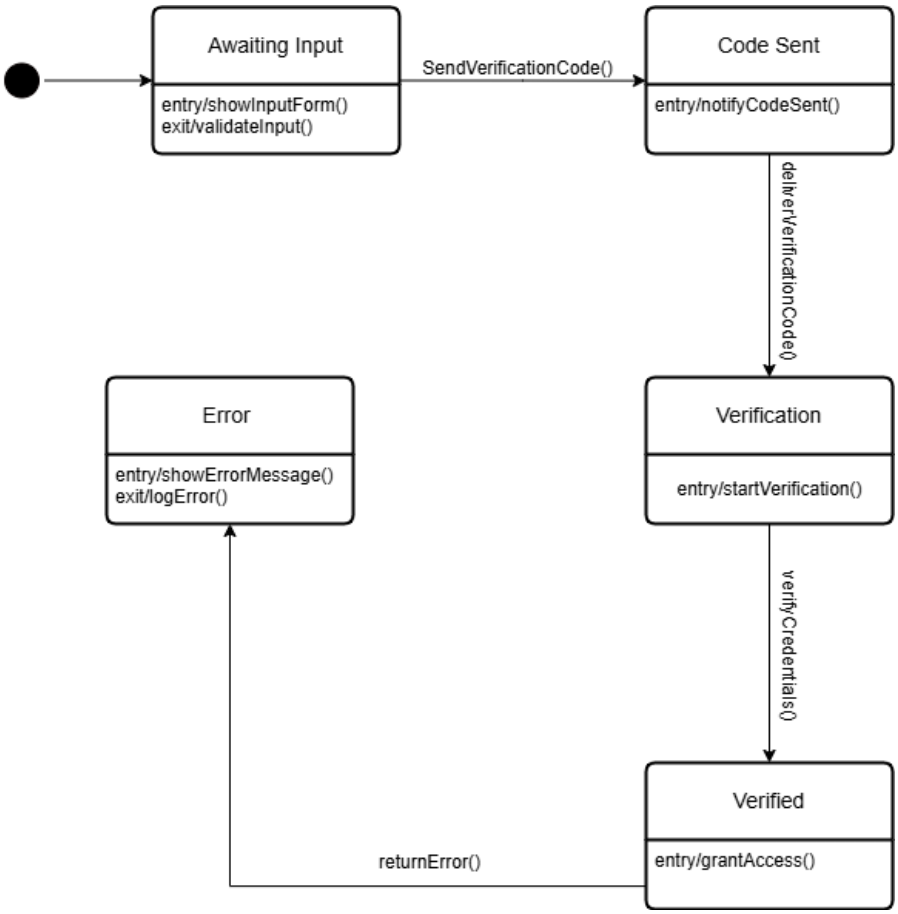
ChildDevice



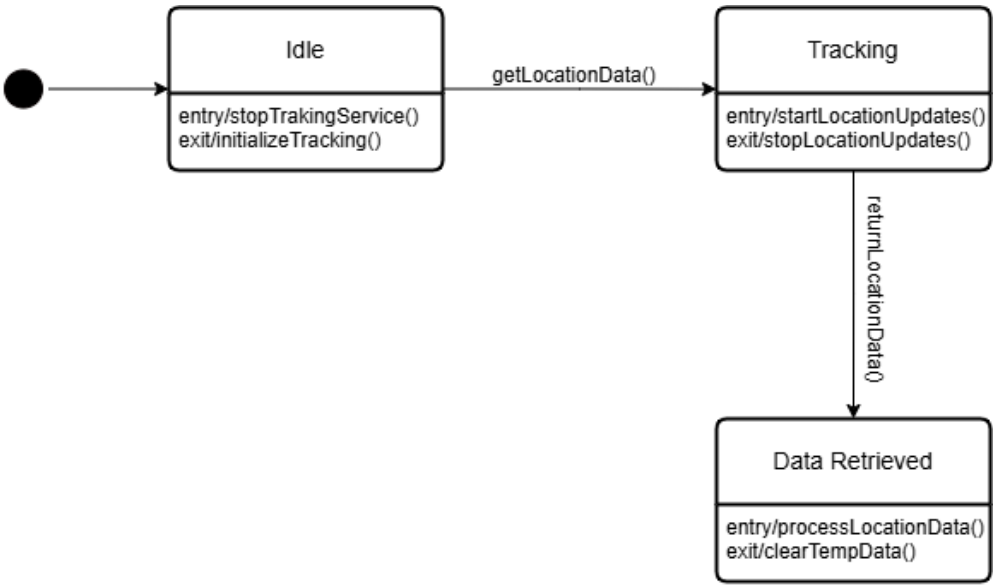
Parent



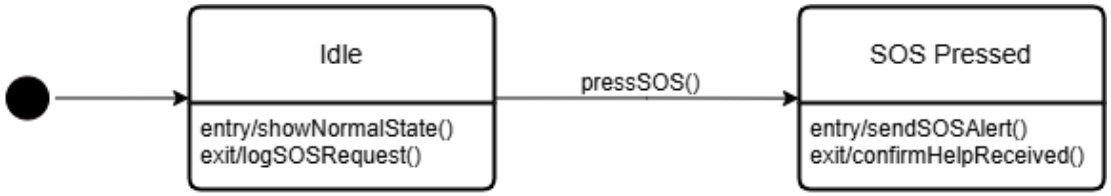
Verification



GPSTrackingService



Child



SecurityPersonnel

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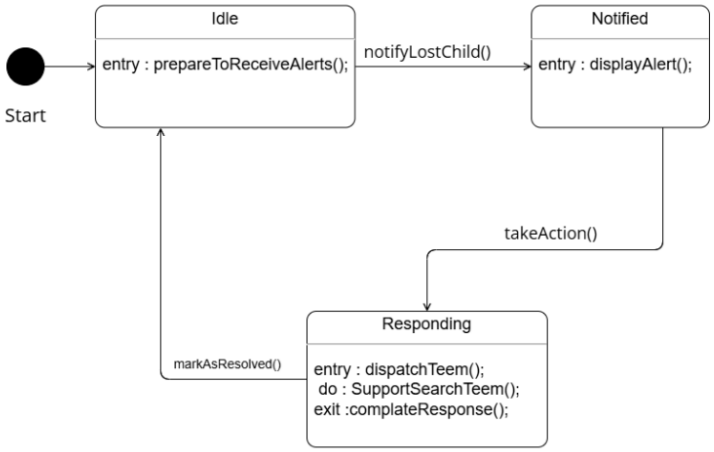
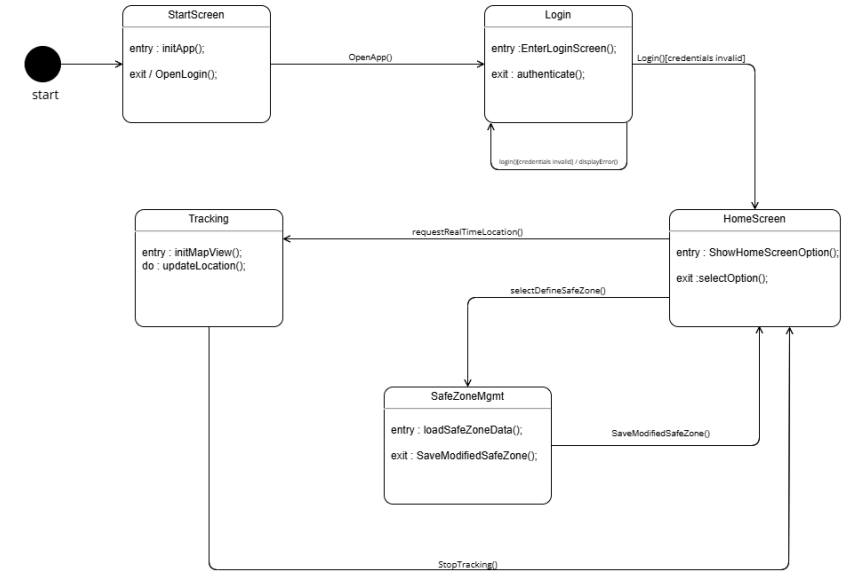
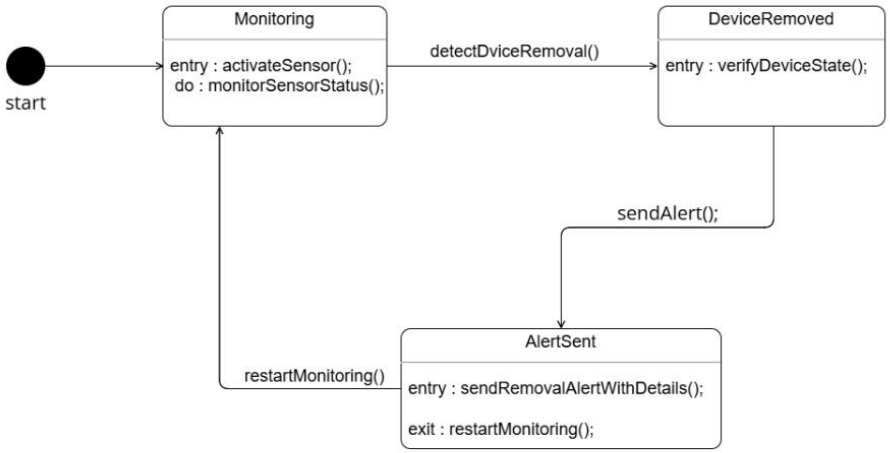


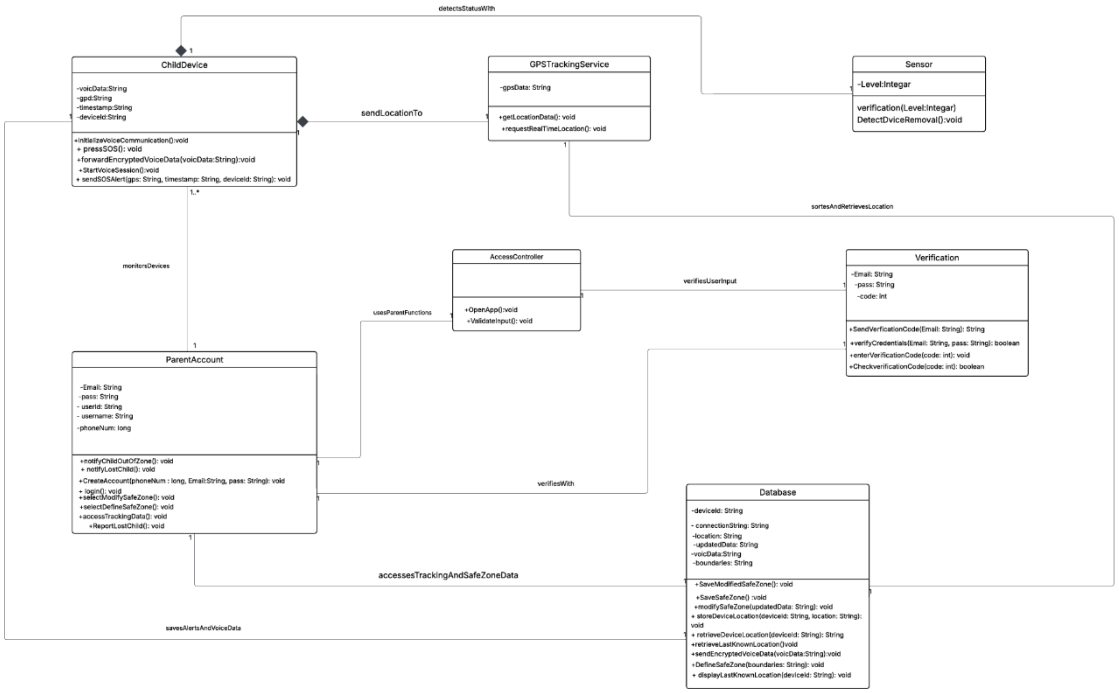
MobileApp



DviceSensor



Class Diagram



Chapter 7 : Design phase-UML system models

[Safe Haven Watch]

Name	Student ID	Email
Lamar Hussain Alharbi	445005711	uqu.edu.sa@s445005711
Jumana Khalid Alsaedi	445007196	uqu.edu.sa@s445007196
Ghala Marzouq Alsaedi	445007536	uqu.edu.sa@s445007536
Reem Ahmed AlShahrani	445000375	s445000375@uqu.edu.sa

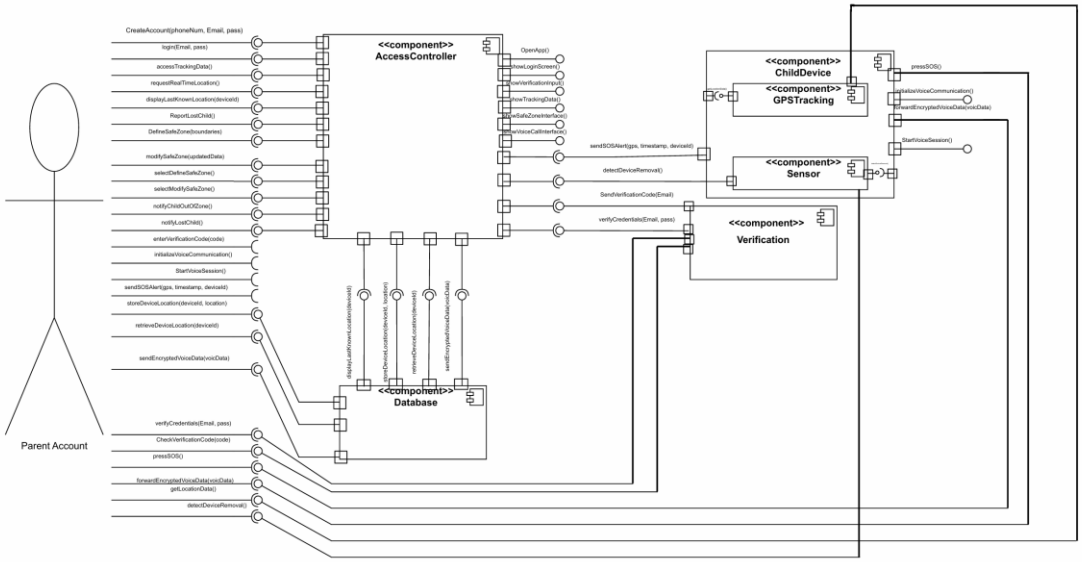
Time meeting :

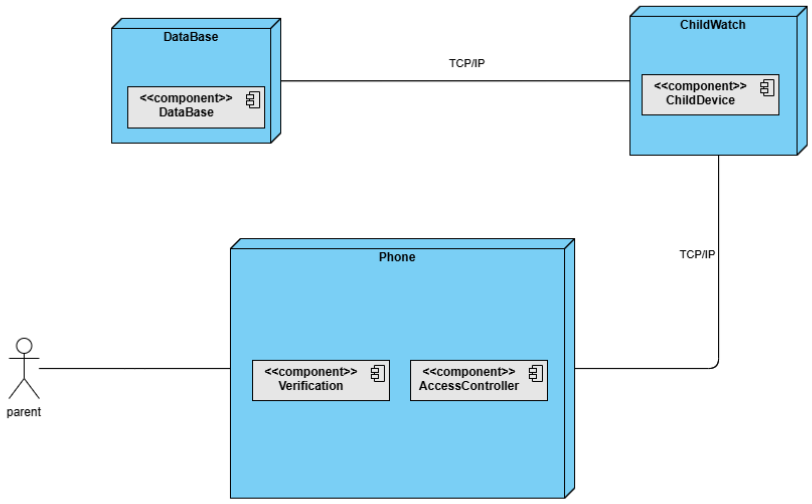
Name Of Group Member	Date And Time
Lamar-Jumana-Ghala-Reem	Tuesday 8-4-2025 11:45 - 10:00
Lamar-Jumana-Ghala-Reem	Saturday 12-4-2025 10:20 – 9:00

Tasks:

- Component and Development Diagram: Lamar Alharbi
- Component and Development Diagram: Reem AlShahrani
- Component and Development Diagram: Jumana Alsaedi
- Component and Development Diagram: Ghala Alsaedi

Component Diagram



Deployment Diagram

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