EXPERIMENT 15

ITA0305-Mobile Computing For App Development

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15) Design an interactive presentation in Figma explaining the issues in mobile IP.

Aim:

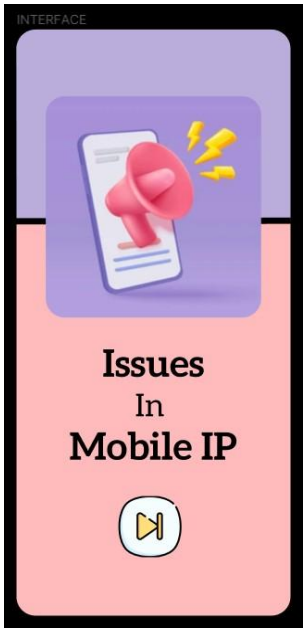
To Design an interactive presentation in Figma explaining the issues in mobile IP

Procedure:

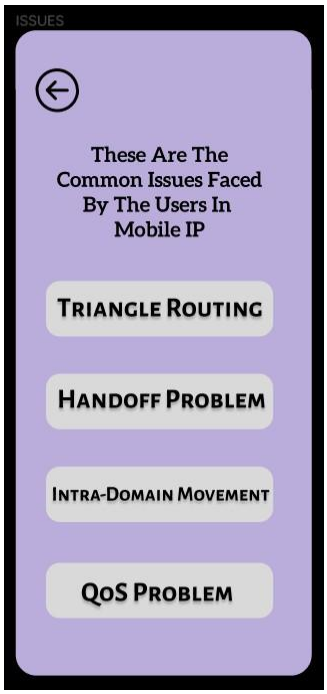
1. Define Presentation Structure
2. Create a Figma Project
3. Design Visual Elements
4. Make it Interactive
5. Add Annotations and Explanations
6. Incorporate Multimedia
7. Storyboard Animation
8. Test the Prototype
9. Collaborate and Gather Feedback
10. Finalize and Share

Step By Step Procedure :

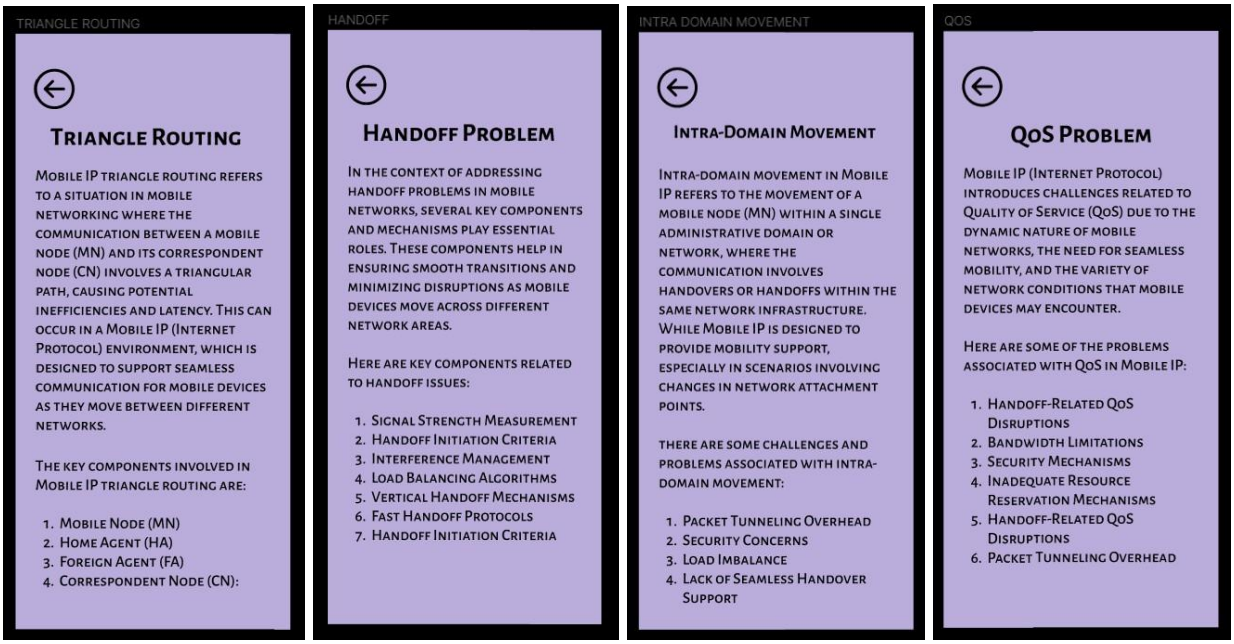
Interface Of Experiment:



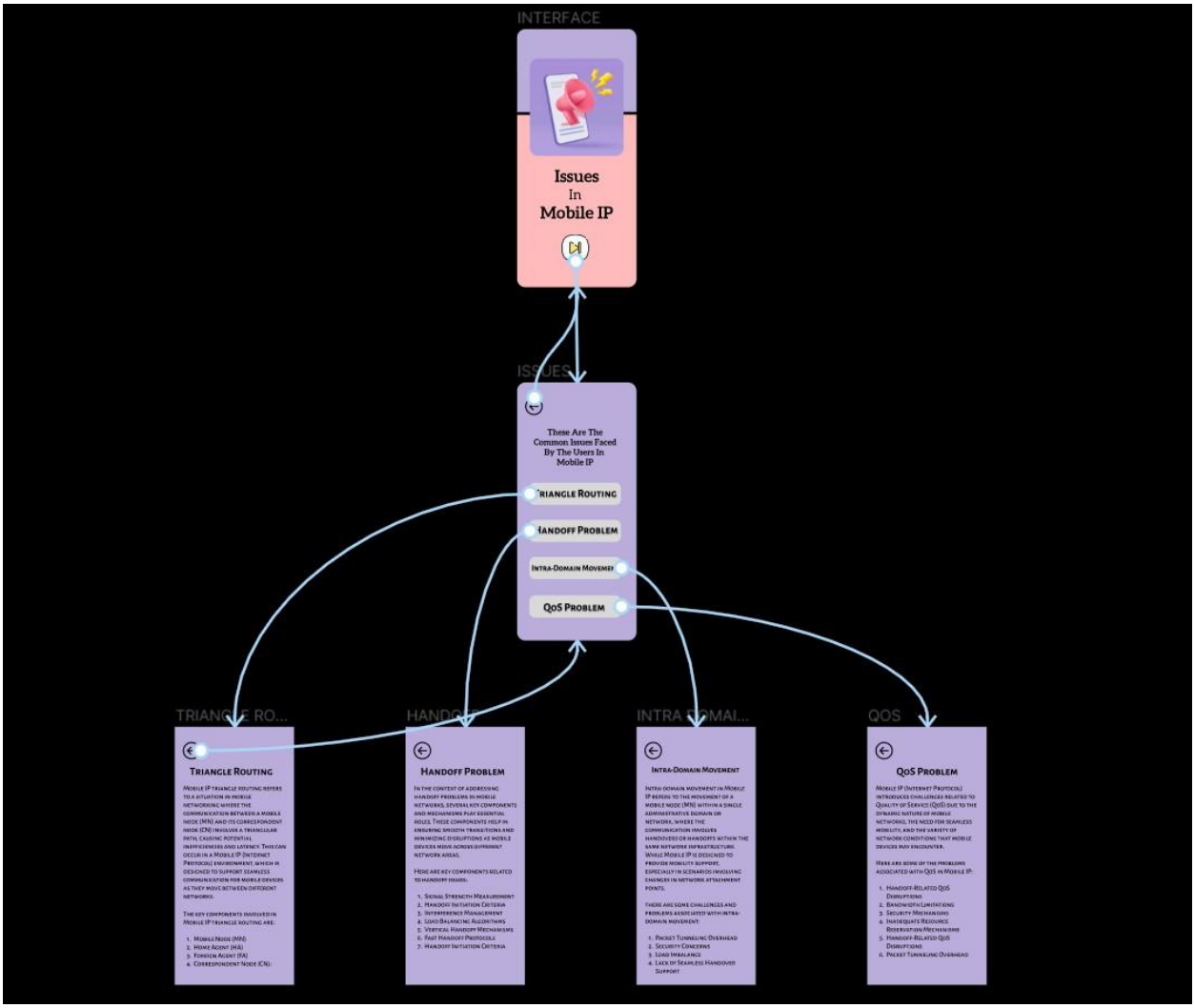
Next Page:



Final Step:


TRIANGLE ROUTING
TRIANGLE ROUTING
MOBILE IP TRIANGLE ROUTING REFERS TO A SITUATION IN MOBILE NETWORKING WHERE THE COMMUNICATION BETWEEN A MOBILE NODE (MN) AND ITS CORRESPONDENT NODE (CN) INVOLVES A TRIANGULAR PATH, CAUSING POTENTIAL INEFFICIENCIES AND LATENCY. THIS CAN OCCUR IN A MOBILE IP (INTERNET PROTOCOL) ENVIRONMENT, WHICH IS DESIGNED TO SUPPORT SEAMLESS COMMUNICATION FOR MOBILE DEVICES AS THEY MOVE BETWEEN DIFFERENT NETWORKS.
THE KEY COMPONENTS INVOLVED IN MOBILE IP TRIANGLE ROUTING ARE:
1. MOBILE NODE (MN)
2. HOME AGENT (HA)
3. FOREIGN AGENT (FA)
4. CORRESPONDENT NODE (CN):
HANDOFF
HANDOFF PROBLEM
IN THE CONTEXT OF ADDRESSING HANDOFF PROBLEMS IN MOBILE NETWORKS, SEVERAL KEY COMPONENTS AND MECHANISMS PLAY ESSENTIAL ROLES. THESE COMPONENTS HELP IN ENSURING SMOOTH TRANSITIONS AND MINIMIZING DISRUPTIONS AS MOBILE DEVICES MOVE ACROSS DIFFERENT NETWORK AREAS.
HERE ARE KEY COMPONENTS RELATED TO HANDOFF ISSUES:
1. SIGNAL STRENGTH MEASUREMENT
2. HANDOFF INITIATION CRITERIA
3. INTERFERENCE MANAGEMENT
4. LOAD BALANCING ALGORITHMS
5. VERTICAL HANDOFF MECHANISMS
6. FAST HANDOFF PROTOCOLS
7. HANDOFF INITIATION CRITERIA
INTRA DOMAIN MOVEMENT
INTRA-DOMAIN MOVEMENT
INTRA-DOMAIN MOVEMENT IN MOBILE IP REFERS TO THE MOVEMENT OF A MOBILE NODE (MN) WITHIN A SINGLE ADMINISTRATIVE DOMAIN OR NETWORK, WHERE THE COMMUNICATION INVOLVES HANDOVERS OR HANDOFFS WITHIN THE SAME NETWORK INFRASTRUCTURE. WHILE MOBILE IP IS DESIGNED TO PROVIDE MOBILITY SUPPORT, ESPECIALLY IN SCENARIOS INVOLVING CHANGES IN NETWORK ATTACHMENT POINTS.
THERE ARE SOME CHALLENGES AND PROBLEMS ASSOCIATED WITH INTRA-DOMAIN MOVEMENT:
1. PACKET TUNNELING OVERHEAD
2. SECURITY CONCERNS
3. LOAD IMBALANCE
4. LACK OF SEAMLESS HANDOVER SUPPORT
QOS
QOS PROBLEM
MOBILE IP (INTERNET PROTOCOL) INTRODUCES CHALLENGES RELATED TO QUALITY OF SERVICE (QOS) DUE TO THE DYNAMIC NATURE OF MOBILE NETWORKS, THE NEED FOR SEAMLESS MOBILITY, AND THE VARIETY OF NETWORK CONDITIONS THAT MOBILE DEVICES MAY ENCOUNTER.
HERE ARE SOME OF THE PROBLEMS ASSOCIATED WITH QOS IN MOBILE IP:
1. HANDOFF-RELATED QOS DISRUPTIONS
2. BANDWIDTH LIMITATIONS
3. SECURITY MECHANISMS
4. INADEQUATE RESOURCE RESERVATION MECHANISMS
5. HANDOFF-RELATED QOS DISRUPTIONS
6. PACKET TUNNELING OVERHEAD

Prototype:



Result:

Hence the interactive presentation in Figma explaining the issues in mobile IP is created and executed successfully.