

App Concept – Time's Up!

Problem you want to solve:

Students experience boredom during university breaks and lack social engagement. They need quick, engaging group activities that bring them together face-to-face without requiring internet connectivity or lengthy setup time.

App definition statement:

Times Up! is a fast-paced, local party game for 2-6 players. Players compete in rapid-fire challenges, where the slowest gets the bomb, and when it explodes, they're out. Last player standing wins.

The target group consists of children and young adults (12-30). The game is like the “Pass the Bomb” or “hot potato” game that already exists, but with a twist. Instead of just passing the bomb to each other, everyone must solve the same challenge at the same time. The last player to complete each challenge receives the bomb, and after a random number of challenges, it explodes, eliminating that player until only one winner remains. Players can get the bomb multiple times after another, and the challenges consist of easy quizzes, little mathematical questions, and some other haptical challenges like pointing out the phone to the north or shaking it several times.

Prioritized feature list:

MVP (Must Have)

1. Bluetooth peer-to-peer connection (2-6 players)
2. Lobby system with player names and random avatar assignment
3. Challenge system - all players compete simultaneously
4. Last-to-complete detection
5. Bomb passing animation to slowest player
6. Random explosion trigger (hidden from players)
7. Player elimination on explosion
8. Continue rounds until one player remains
9. Challenge time limit (safety timeout)
10. Short break between challenges
11. Winner announcement screen

Phase 2 (Should Have)

12. Variety of challenge types (tap sequences, tilt/angle, compass, math, reaction, etc.)
13. Visual/audio bomb warnings as game progresses
14. Eliminated player spectator view

Phase 3 (Nice to Have)

15. Sound effects and background music
16. Tutorial/how-to-play screen
17. Challenge difficulty scaling
18. Game history (local storage only)

Navigation diagram/screen scribbles:

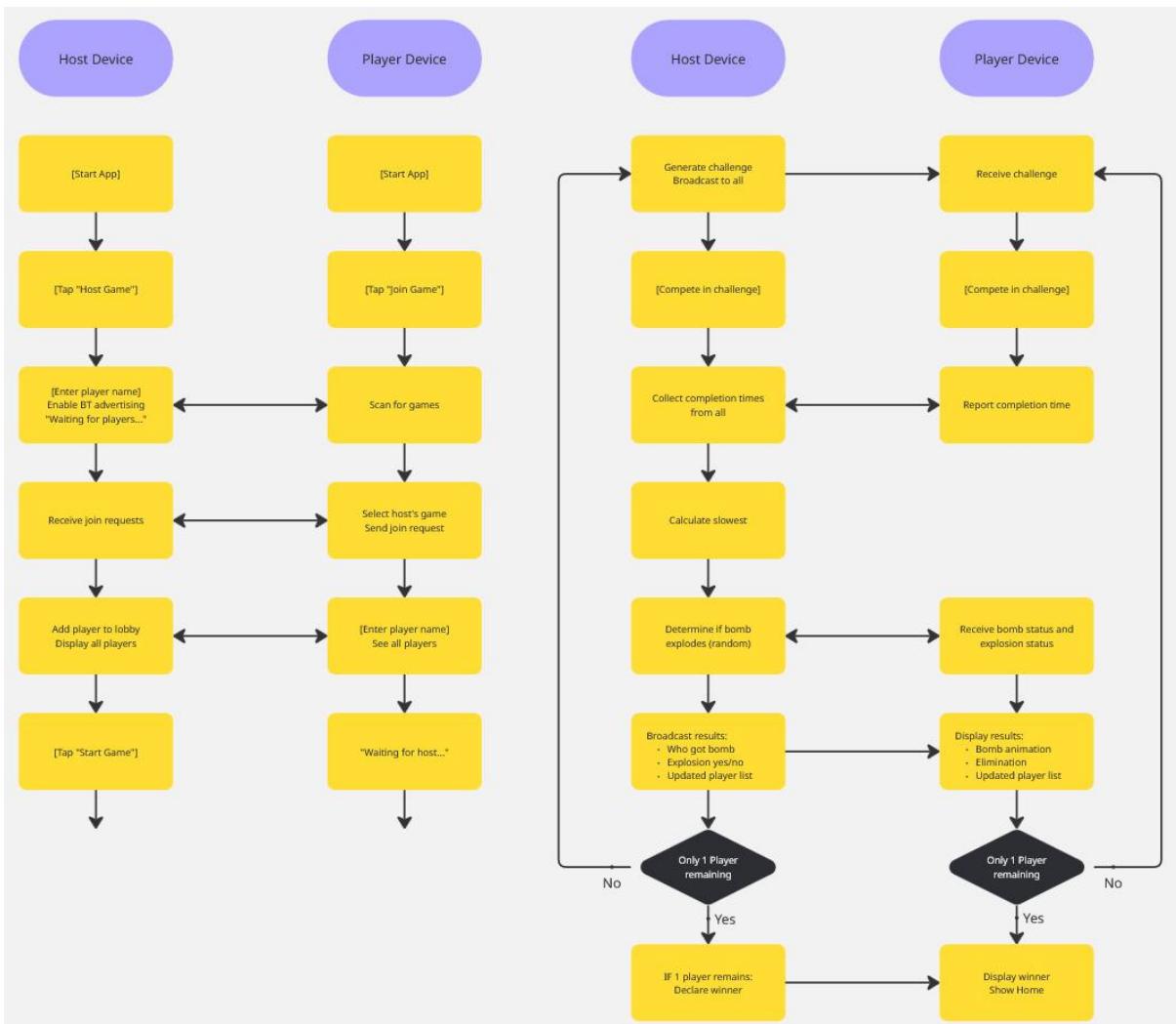


Figure 1: Navigation diagram

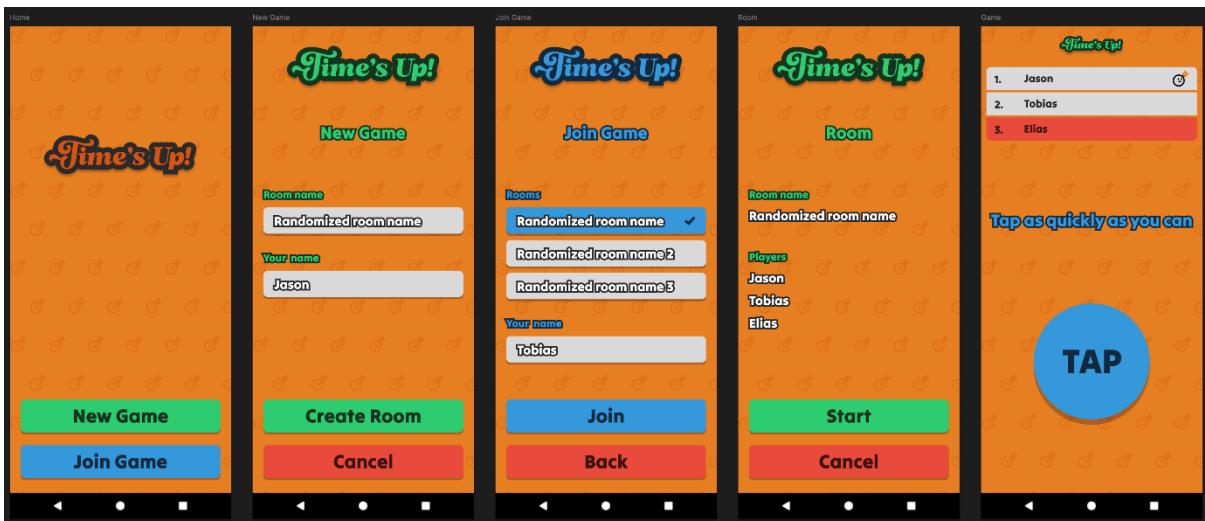


Figure 2: Screen Scribbles

Components list:

Core Components

1. BluetoothManager - Handle BT connections, discovery, data transfer
2. GameEngine - Core game logic, round management, elimination logic
3. BombController - Track bomb holder, random explosion trigger
4. PlayerManager - Player data (names, avatars, status: active/eliminated/winner)
5. RoundManager - Challenge sequencing, round transitions

UI Components

6. HomeScreen
7. LobbySetup
8. WaitingRoom
9. ChallengeScreen
10. BombTransferScreen
11. EliminationScreen
12. WinnerScreen
13. PlayerIndicators - Show player status during challenges
14. AvatarGenerator - Random avatar assignment

Game Mechanics Components

15. ChallengeSystem - Generate, validate, track completion
16. CompletionTracker - Monitor all players, detect last finisher
17. TimeoutManager - Challenge time limit enforcement
18. ExplosionController - Random trigger after X challenges

Challenge Types

19. TapSequenceChallenge - Tap pattern repetition
20. TiltChallenge - Hold phone at specific angle
21. CompassChallenge - Point phone north/south/east/west
22. MathChallenge - Quick math problems
23. ReactionChallenge - Tap when color changes
24. ShakeChallenge - Shake phone X times
25. DrawChallenge - Trace a shape
26. (Expandable challenge library)

Animation Components

27. BombAnimator - Bomb visual effects, transfer animation
28. ExplosionAnimator - Boom effects
29. TransitionAnimator - Screen transitions, rubber hose style

Utility Components

30. SoundManager - Audio effects
31. HapticManager - Vibration feedback
32. SyncManager - Keep all devices in sync