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# Maintenance Manual for FRAS Firestore Database Scheduled  
Backups Data Reauthenticate account |  
+-- **Render backend offline** | Outage or redeploy failure |  
  Restart service in Render Manual Redeploy |  
+-- **Data not saving to Firestore** | Permission issue | Check  
  Firestore rules and ensure project limits not exceeded. |  
+-- **Pending records never finalize** | Possible task misfire |  
  Manually execute `attendanceDecisionQueue` and check logs. |  
+-- **Frontend not loading** | Corrupted build | Rebuild (`npm run  
  build`) and redeploy. |  
+-- **Slow performance** | Increased traffic or unoptimized API |  
  Profile queries; enable caching. |
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5. Backup & Recovery Procedures

1. **Daily Complete Backup:** Export Firestore data
2. **Verification:** Confirm record count + hash match between backup and production.
3. **Restore Procedure:**
 - Import data into Firestore.
 - Validate schema.
 - Swap after confirmation.

6. Change Management Process

1. **Submit Change Request:** Document the modification's purpose and its impact.
 2. **Approval:** Must be reviewed by Project Manager, Lead Developer, and Stakeholders.
 3. **Testing:** Implement in development branch, run complete tests.
 4. **Deployment:** Merge into `main`, conduct Render + Firebase redeploy.
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7. Appendices

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### Appendix A - Deployment  
#### Backend Web Service in Render.  
2. Link GitHub repo (`/backend` directory).  
3. Environment Firebase Hosting  
```bash  
npm run build
```

```
firebase deploy --only hosting
```
```

~~### Appendix C Diagrams~~

~~! [Class
Diagram] (<https://github.com/bstep0/FRAS/blob/main/Revised%20Documentation%20For%20Implementation%20Phase/FRAS-ClassDiagram.png>)~~

~~! [Data Flow
Diagram] (<https://github.com/bstep0/FRAS/blob/main/Revised%20Documentation%20For%20Implementation%20Phase/FRAS-DFD.png>)~~

~~! [Entity Relationship
Diagram] (<https://github.com/bstep0/FRAS/blob/main/Revised%20Documentation%20For%20Implementation%20Phase/FRAS-ERD.png>)~~

~~! [Use Case
Diagram] (<https://github.com/bstep0/FRAS/blob/main/Revised%20Documentation%20For%20Implementation%20Phase/FRAS-ERD.png>)~~