Flow Manager

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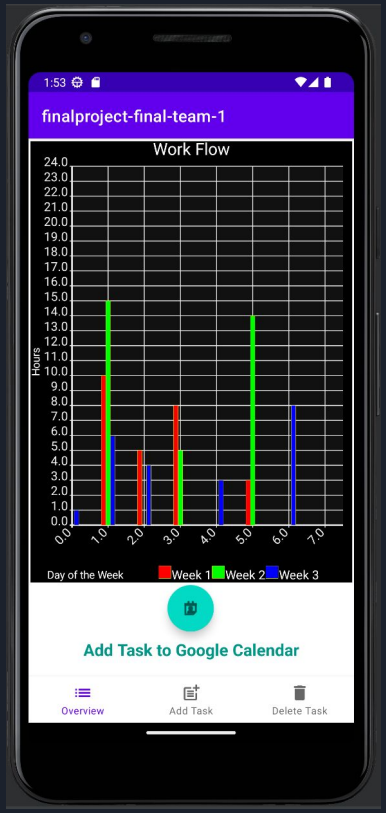
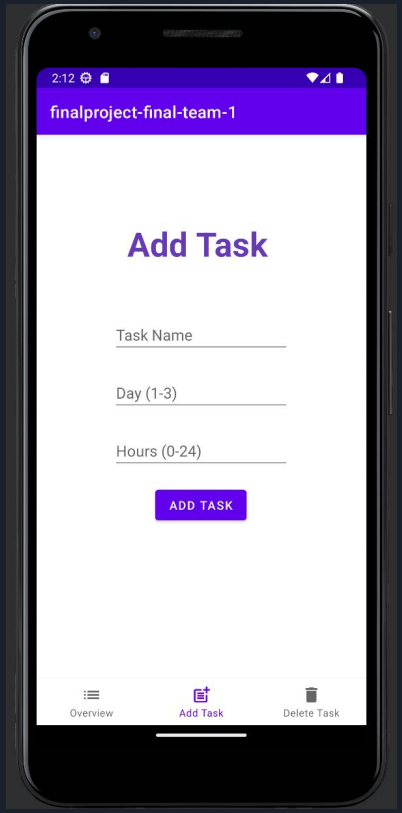
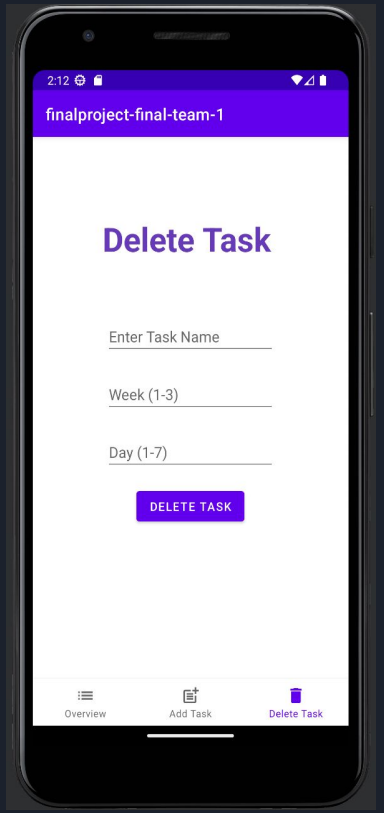
Android Concepts Used

- API
- Fragments
- Firebase
- Notifications
- Permission
- Navigation
- Floating Action Button
- Material Design
- MVVM Pattern
- Live Data
- Repository

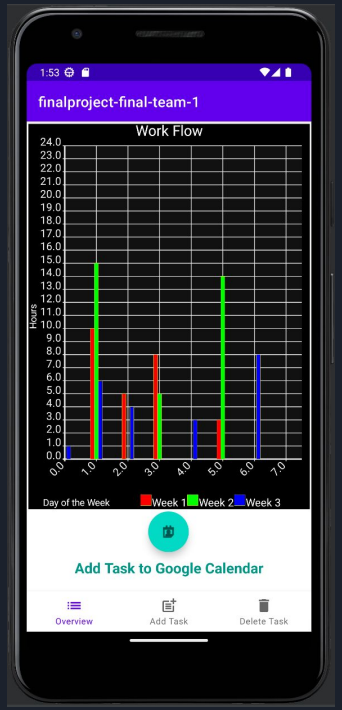
User Interface Design

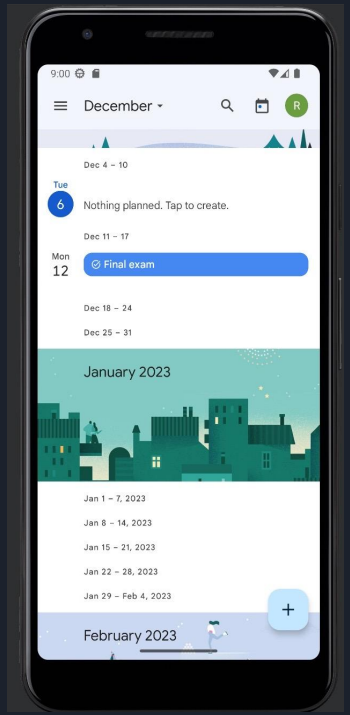


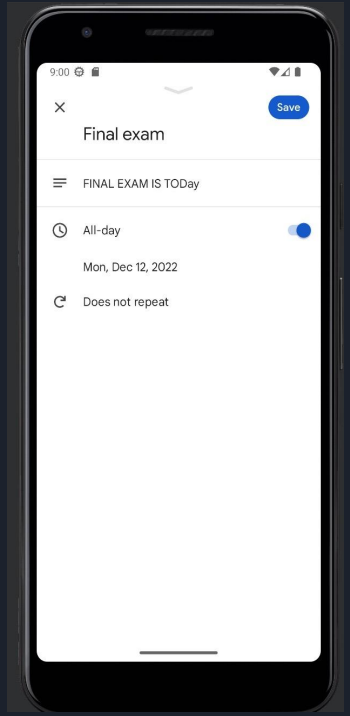


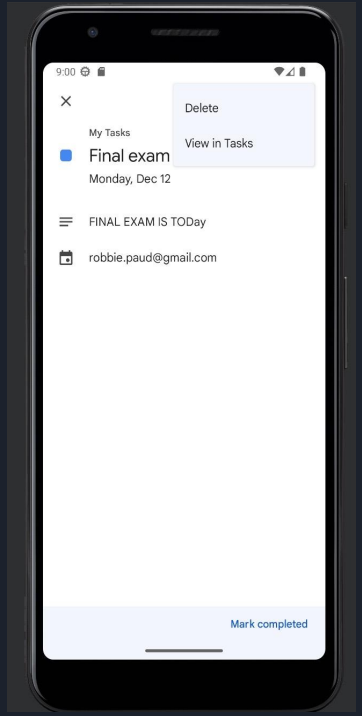


Google Calendar Integration

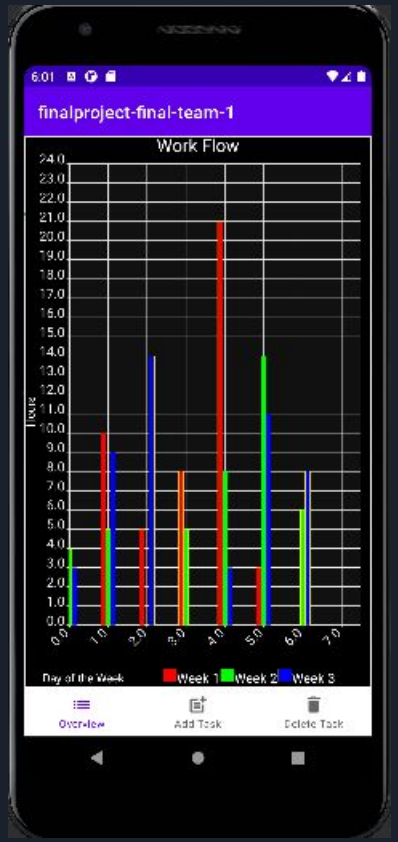


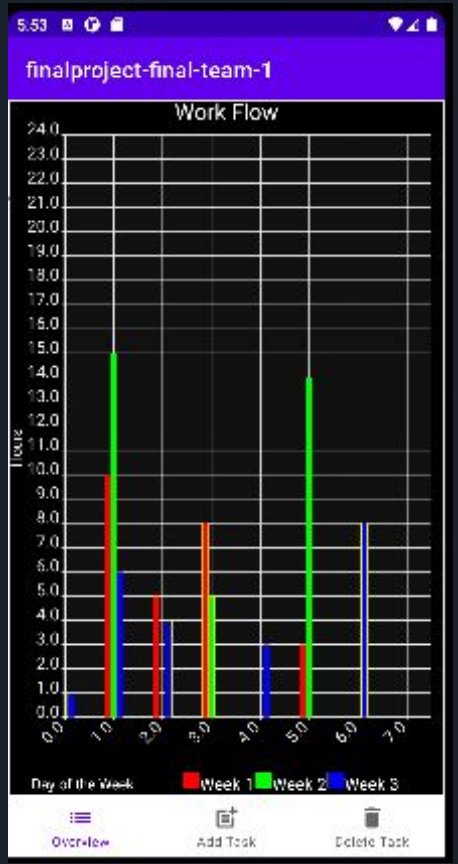


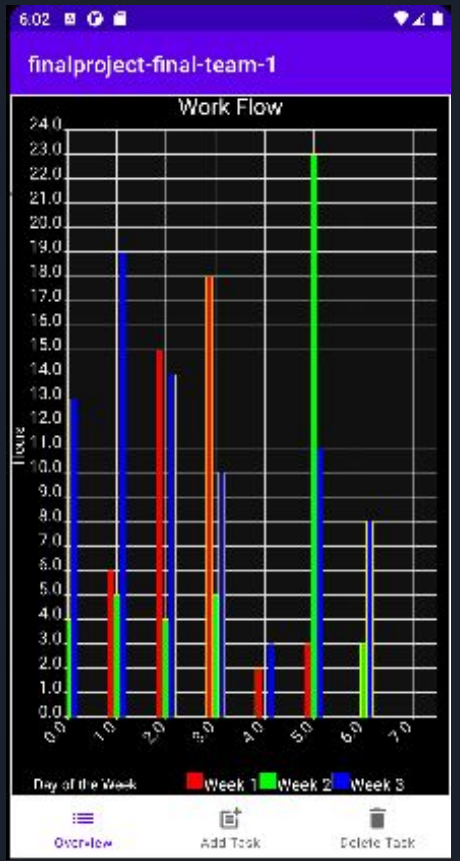


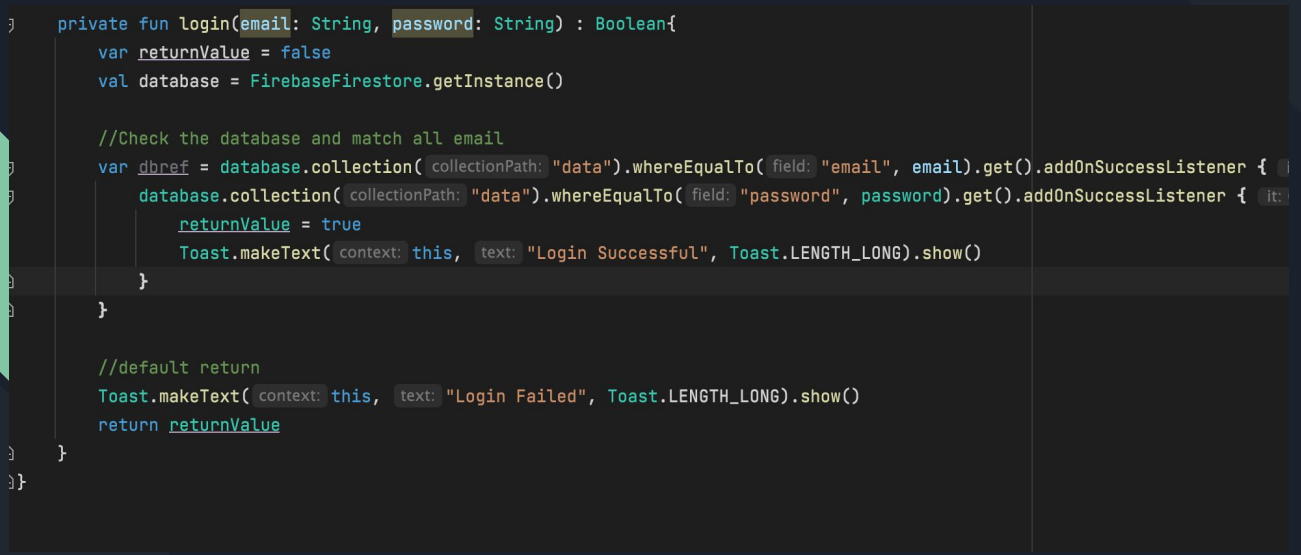


Gantt Chart Implementation and Features









```
    private fun login(email: String, password: String) : Boolean{
        var returnValue = false
        val database = FirebaseFirestore.getInstance()

        //Check the database and match all email
        var dbref = database.collection( collectionPath: "data").whereEqualTo( field: "email", email).get().addOnSuccessListener {
            database.collection( collectionPath: "data").whereEqualTo( field: "password", password).get().addOnSuccessListener {
                returnValue = true
                Toast.makeText( context: this, text: "Login Successful", Toast.LENGTH_LONG).show()
            }
        }

        //default return
        Toast.makeText( context: this, text: "Login Failed", Toast.LENGTH_LONG).show()
        return returnValue
    }
}
```

Database Code

Filling Arrays for the Gantt Chart

```
private fun fillArrays()
{
    val database = FirebaseFirestore.getInstance()
    var dbReference = database.collection( collectionPath: "data").whereEqualTo( field: "week",  value: 1).get().addOnSuccessListener {  it: QuerySnapshot
        for(document in it ){
            week1[document.data.getValue( key: "day") as Int] = document.data.getValue( key: "hours") as Int
        }
    }
     dbReference = database.collection( collectionPath: "data").whereEqualTo( field: "week",  value: 2).get().addOnSuccessListener {  it: QuerySnapshot!
        for(document in it ){
            week1[document.data.getValue( key: "day") as Int] = document.data.getValue( key: "hours") as Int
        }
    }
     dbReference = database.collection( collectionPath: "data").whereEqualTo( field: "week",  value: 3).get().addOnSuccessListener {  it: QuerySnapshot!
        for(document in it ){
            week1[document.data.getValue( key: "day") as Int] = document.data.getValue( key: "hours") as Int
        }
    }
}
```

Implementation of Gantt Chart Data

```
fun addTask(name: String, hours: Int, day:Int) {
    val user: MutableMap<String, Any> = HashMap()
    val db = FirebaseFirestore.getInstance()
    //Add additional fields as needed
    user["name"] = name
    user["day"] = day
    user["hours"] = hours

    db.collection( collectionPath: "task").add(user).addOnFailureListener { e ->
        Toast.makeText(this.context, text: "Unable to add entry", Toast.LENGTH_LONG).show()
    }.addOnSuccessListener {  it: DocumentReference!
        Toast.makeText(this.context, text: "Entry has been added to the database", Toast.LENGTH_LONG)
            .show()
    }
}
```