

Compose Input: A Demonstration Of Text Input And Validation With Android Compose

Introduction

1.1. Overview

Project Description

The project demonstrate the use of Android Compose UI toolkit to build a survey app.

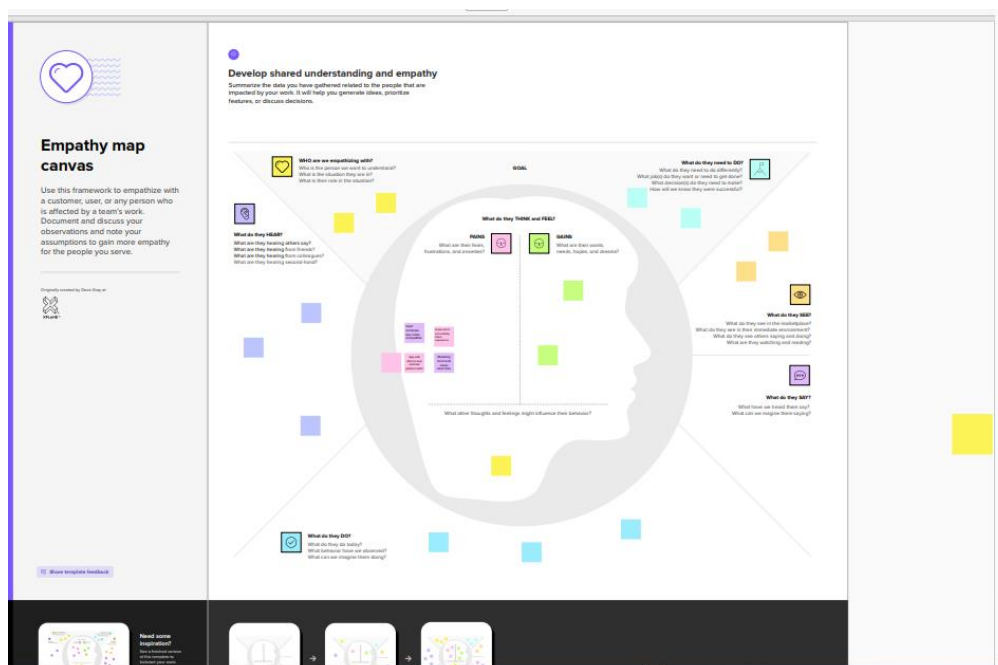
The app allows the user to answer a series of questions.

Purpose

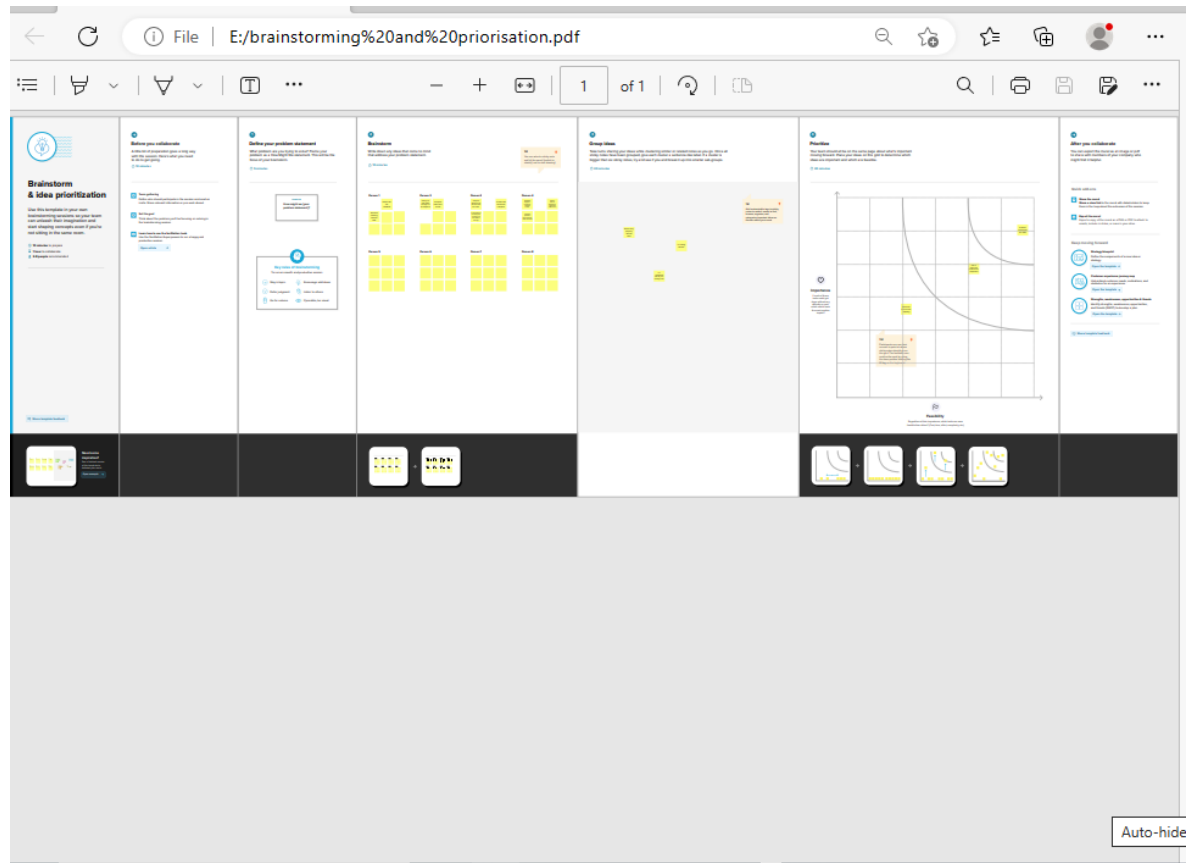
The survey app can be used in any businesses to keep a tab on customers' needs, likes, and dislikes and craft experiences that are aligned to their expectations.

Problem Definition and thinking

2.1. Empathy Map

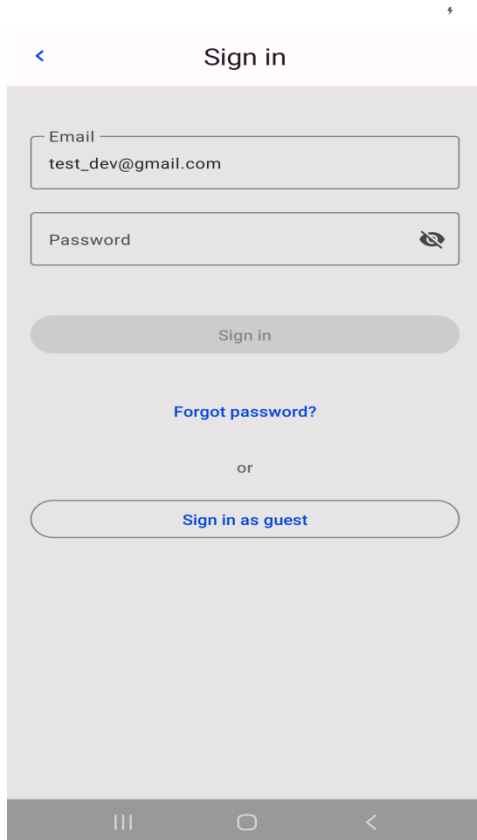


2.2. Ideation and Brainstorming Map



Result

Sign in



Sign in

Email
test_dev@gmail.com

Password

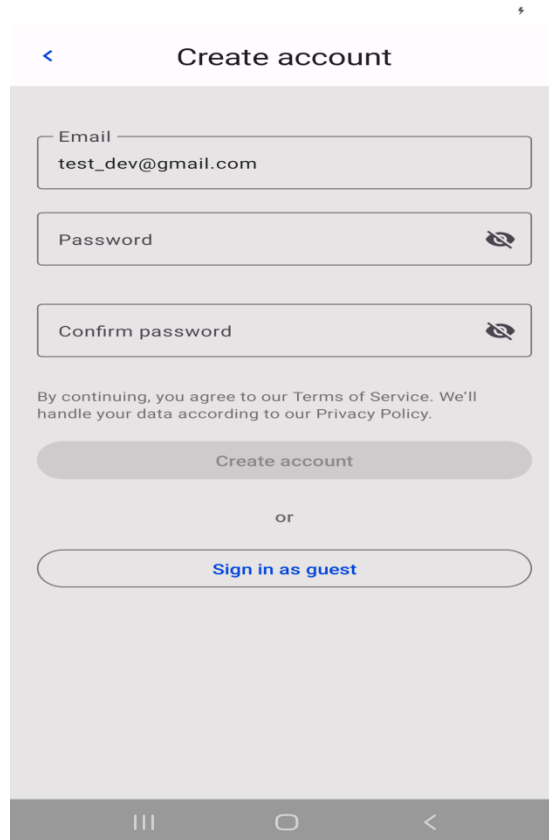
Sign in

[Forgot password?](#)

or

[Sign in as guest](#)

Sign up



Create account

Email
test_dev@gmail.com

Password

Confirm password

By continuing, you agree to our [Terms of Service](#). We'll handle your data according to our [Privacy Policy](#).

Create account

or

[Sign in as guest](#)

Questions

1 of 5

Which platform are you comfortable making payments online through?

Select all that apply.

Google Pay☒

PayPal☒

Apple Pay☐

Net Banking☐

Debit/Credit☐

Next

2 of 5

Do you feel safe shopping online?

Select one.

☒ Safe

☐ not bad

☐ Unsafe

☐ None

Previous

Next

3 of 5

When was the last time you purchase a Product?

Select date.

Thu, Apr 13

Previous

Next

4 of 5

How often do you visit our shopping app?

Daily

On need basis


Monthly

Previous

Next

5 of 5

Show off your latest online product review!

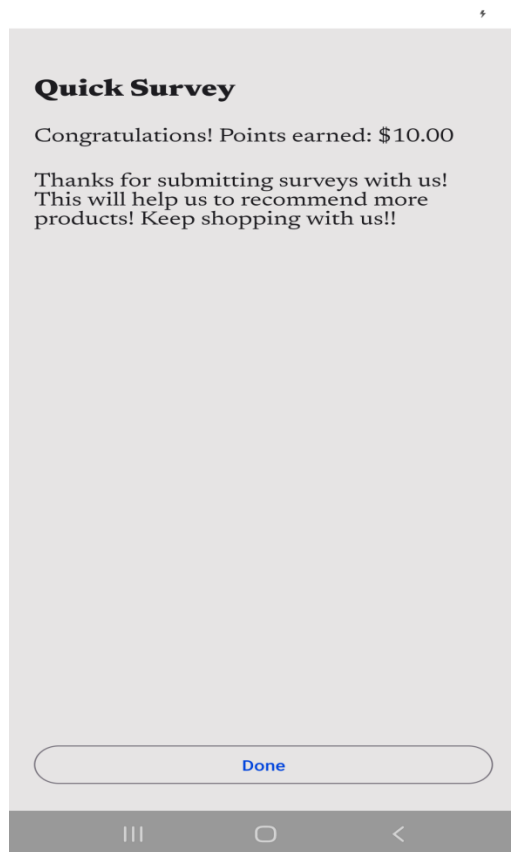


ADD PHOTO

Previous

Done

Done



A mobile app screen titled "Quick Survey". It features a light gray background. At the top, the title "Quick Survey" is in bold. Below it, a message reads "Congratulations! Points earned: \$10.00". Further down, another message says "Thanks for submitting surveys with us! This will help us to recommend more products! Keep shopping with us!!". At the bottom, there is a rounded rectangular button with the text "Done" in blue. The screen is framed by a dark gray mobile OS navigation bar at the bottom.

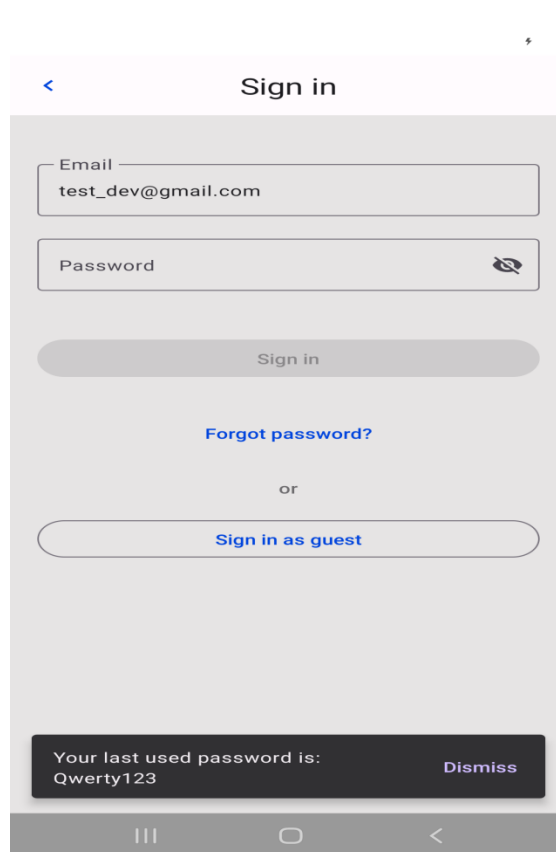
Quick Survey

Congratulations! Points earned: \$10.00

Thanks for submitting surveys with us!
This will help us to recommend more
products! Keep shopping with us!!

Done

Forgot Password



A mobile app screen titled "Sign in". It has a light gray background. At the top, there is a back arrow and the title "Sign in". Below this, there are two input fields: "Email" with the value "test_dev@gmail.com" and "Password" with a toggle icon. A "Sign in" button is positioned below the password field. Underneath is a link "Forgot password?". Below that is the word "or" and a "Sign in as guest" button. At the bottom, a dark gray toast message displays "Your last used password is: Qwerty123" with a "Dismiss" link. The screen is framed by a dark gray mobile OS navigation bar at the bottom.

< Sign in

Email
test_dev@gmail.com

Password

Sign in

[Forgot password?](#)

or

[Sign in as guest](#)

Your last used password is:
Qwerty123 [Dismiss](#)

Advantages

The survey app provides a more convenient and better responses and avoids the tedious and hectic way of offline surveys. It could be accessed from any device with a significant cost cutting.

Disadvantages

Responses might be inaccurate in case of lengthy, complicated and confusing surveys. There may be large number of unanswered questions and it may be difficult to interpret the sentiments behind the answers.

Conclusion

It is important for any business to continue evolving and improve their service to satisfy the need of customers. The only way to cope with this is to know the customer's changing needs and their suggestions for improvement. Through an online survey app, this can be easily made possible as it is accessed from anywhere.

Future Scope

The app could be modified to be accessed from any device and the questions should be changed to get a deeper knowledge about the customer's requirement and satisfaction.

Appendix

A. Source Code

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools">

<uses-permission android:name="android.permission.INTERNET" />

<application
android:name="com.devikumari.survey.base.SurveyApp"
android:allowBackup="false"
```

```

android:icon="@mipmap/ic_launcher"
android:roundIcon="@mipmap/ic_launcher"
android:label="@string/app_name"
android:supportsRtl="true"
android:theme="@style/Theme.Survey"
android:usesCleartextTraffic="true"
tools:targetApi="31" >
<activity
android:name="com.devikumari.survey.base.MainActivity"
android:exported="true" >
<intent-filter>
<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
</activity>

<provider
android:name="androidx.core.content.FileProvider"
android:authorities="${applicationId}.fileprovider"
android:grantUriPermissions="true"
android:exported="false">
<meta-data
android:name="android.support.FILE_PROVIDER_PATHS"
android:resource="@xml/filepaths" />
</provider>
</application>

</manifest>

```

build.gradle

```

buildscript{
    ext{
        gradle_version = '7.4.1'
        kotlin_version = '1.8.0'
        compose_bom_version = '2023.01.00'
        material3_version = '1.1.0-beta01'
        material_version = '1.4.0'
        compose_version = '1.4.0'
        hilt_navigation_compose_version = '1.0.0'
        constraintlayout_version = '1.0.1'
        coil_version = '2.2.2'
        accompanist_pager_version = '0.18.0'
        materialchip_version = '3.0.5'
        navigation_version = '2.6.0-alpha05'
        preview_version = '1.4.0'
        core_version = '1.9.0'
        material_icons_version = '1.4.0'
        fragment_version = '1.3.3'
        activity_version = '1.2.0-alpha08'
        hilt_version = '2.45'
    }
    dependencies {
        classpath"com.google.dagger:hilt-android-gradle-plugin:$hilt_version"
    }
}

```

```

}

plugins {
id 'com.android.application' version "${gradle_version}" apply false
id 'com.android.library' version "${gradle_version}" apply false
id 'org.jetbrains.kotlin.android' version "${kotlin_version}" apply false
}

task clean(type: Delete) {
delete rootProject.buildDir
}

```

settings.gradle

```

pluginManagement{
repositories {
google()
mavenCentral()
gradlePluginPortal()
}
}
dependencyResolutionManagement{
repositoriesMode.set(RepositoriesMode.FAIL_ON_PROJECT_REPOS)
repositories {
google()
mavenCentral()
}
}
rootProject.name = "survey"
include ':app'

```

build.gradle(app)

```

plugins {
id "com.android.application"
id "kotlin-android"
id "kotlin-kapt"
id "dagger.hilt.android.plugin"
}

android {
compileSdk33

defaultConfig{
applicationId"com.devikumari.survey"
minSdk21
targetSdk33
versionCode1
versionName"1.0"

testInstrumentationRunner"androidx.test.runner.AndroidJUnitRunner"
}

buildTypes{
release {
minifyEnabledfalse
}
}

```



```

proguardFiles getDefaultProguardFile('proguard-android-optimize.txt'),
'proguard-rules.pro'
}
}
compileOptions{
sourceCompatibility JavaVersion.VERSION_11
targetCompatibility JavaVersion.VERSION_11
}
kotlinOptions{
jvmTarget = JavaVersion.VERSION_11
}
buildFeatures{
compose true
}
composeOptions{
kotlinCompilerExtensionVersion compose_version
}
namespace 'com.devikumari.survey'
}

dependencies {
//Compose
implementation platform("androidx.compose:compose-bom:$compose_bom_version")
    implementation "androidx.compose.material3:material3:$material3_version"
implementation "com.google.android.material:material:$material_version"

//Hilt
implementation "com.google.dagger:hilt-android:$hilt_version"
kapt "com.google.dagger:hilt-android-compiler:$hilt_version"
//Hilt Navigation Compose
implementation "androidx.hilt:hilt-navigation-
compose:$hilt_navigation_compose_version"
//ConstraintLayout
implementation("androidx.constraintlayout:constraintlayout-
compose:$constraintlayout_version")
//Image Loading
implementation("io.coil-kt:coil-compose:$coil_version")
//pager
implementation("com.google.accompanist:accompanist-
pager:$accompanist_pager_version")
//chips
implementation("com.robertlevonyan.compose:materialchip:$materialchip_version")
//navigation
implementation("androidx.navigation:navigation-compose:$navigation_version")
//Preview
implementation("androidx.compose.ui:ui-tooling-preview:$preview_version")
    implementation("androidx.compose.material:material-icons-
extended:$material_icons_version")
// Kotlin
implementation("androidx.core:core-ktx:$core_version")
    implementation("androidx.fragment:fragment-ktx:$fragment_version")
    implementation("androidx.activity:activity-ktx:$activity_version")

}
gradle-wrapper

```

#Wed Mar 22 22:44:54 IST 2023

distributionBase=GRADLE_USER_HOME

distributionUrl=https\://services.gradle.org/distributions/gradle-7.5-bin.zip

distributionPath=wrapper/dists

zipStorePath=wrapper/dists

zipStoreBase=GRADLE_USER_HOME