



UNIVERSITI MALAYSIA TERENGGANU

**BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING)
WITH HONOURS**

SEM I (2023 / 2024)

CSM 3114:

Framework-Based Mobile Application Development

Project 2 – Hotel Management System

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Table of Contents

1. Executive Summary.....	3
2. Use Case.....	4
3. The common Structure of Tree Widget.....	5
4. Flutter Widget and Features.....	7
5. Sample of Interface with Explanation.....	9
6. Conclusion.....	12
7. Reference.....	13
8. GitHub.....	14

THE DEVELOPING OF MOBILE APPS PROTOTYPING ABC TECHNOLOGIES

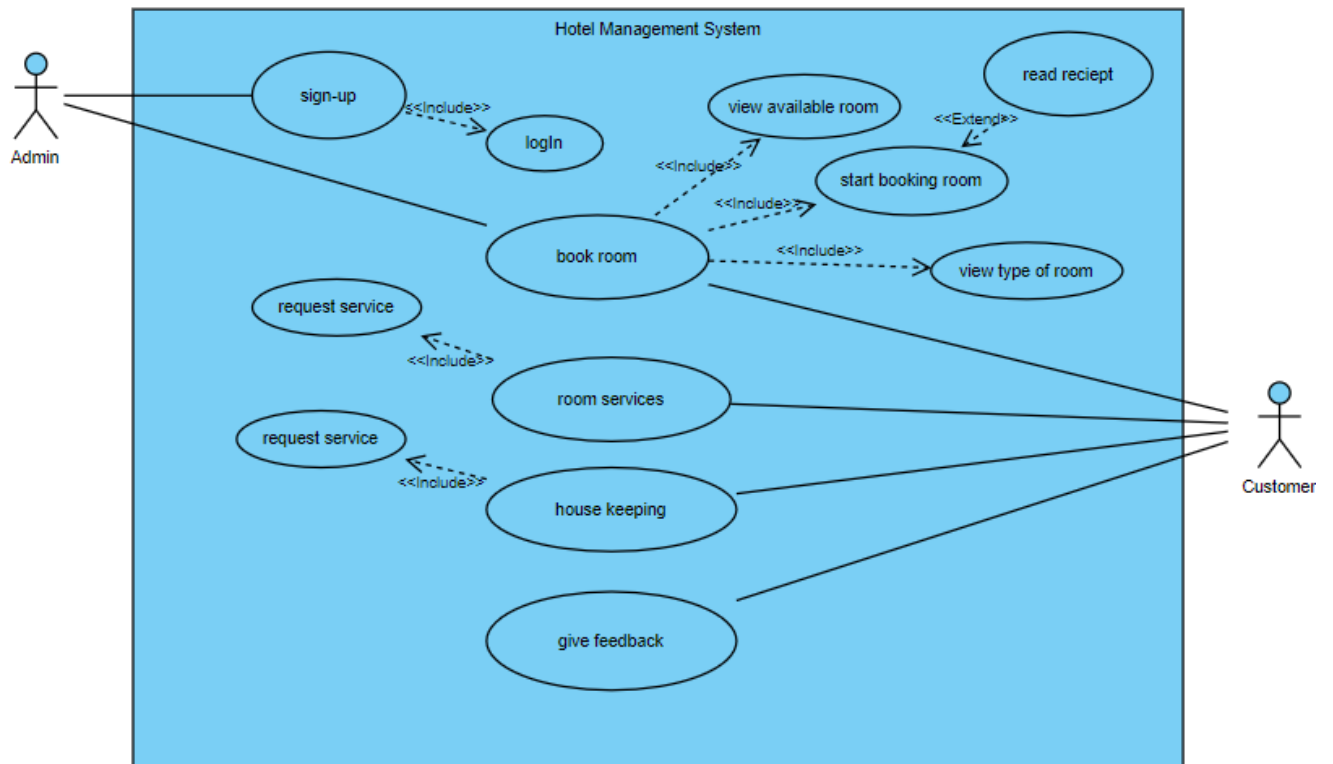
1. Executive Summary

ABC Technologies is spearheading innovation in the hospitality sector with the introduction of a groundbreaking Hotel Management App. This mobile application is strategically aligned with ABC Technologies' vision for the future of IT businesses, emphasizing the pivotal role of mobile applications in enhancing customer experiences and optimizing hotel operations. The primary objectives of this initiative are to facilitate seamless remote interactions with hotel services, elevate accessibility and ease of use, and revolutionize traditional hotel management practices through technological integration.

The key features of the Hotel Management App are designed to cater to the evolving needs of modern travellers. The booking module offers a user-friendly interface, dynamic date selections, and transparent cost breakdowns, empowering users to effortlessly reserve rooms of their choice. The room service and housekeeping functionalities provide a streamlined process for users to request and confirm specific services, ranging from cleaning to personalized amenities. Furthermore, the customer feedback module ensures that users can easily provide ratings and comments on various aspects of the hotel service, contributing to a continuous improvement loop.

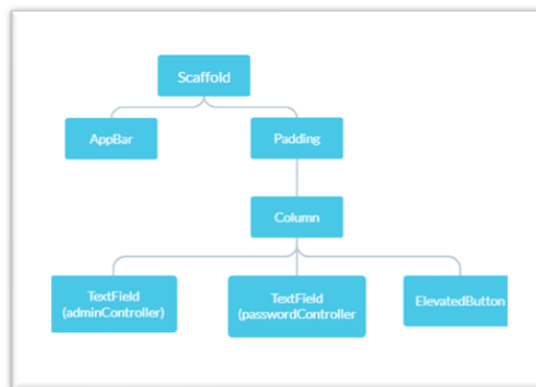
Throughout the development process, ABC Technologies has prioritized user-centric design, leveraging prototyping tools for interactive mockups and conducting usability testing to refine the app's functionality. The deployment of the app to major app stores marks a significant milestone, positioning ABC Technologies at the forefront of technological innovation in the hospitality industry. This Hotel Management App prototype not only meets the immediate business objectives but also sets the stage for a transformative impact on the landscape of hotel services and customer interactions.

2. Use Case

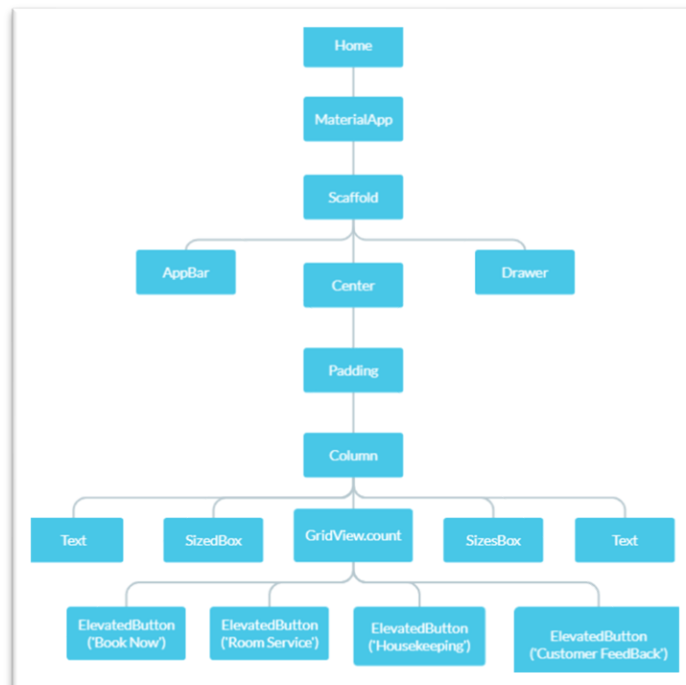


3. The Common Structure of tree Widgets

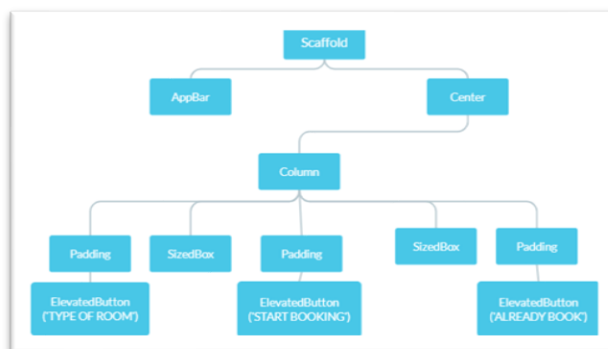
Sign Up page.



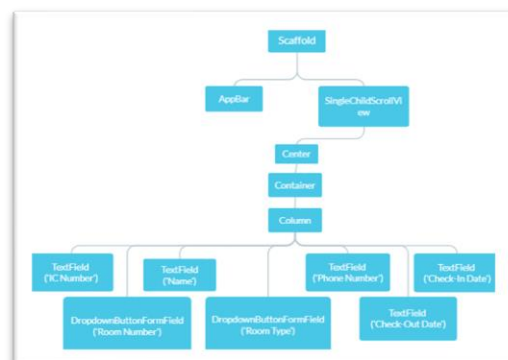
HomePage



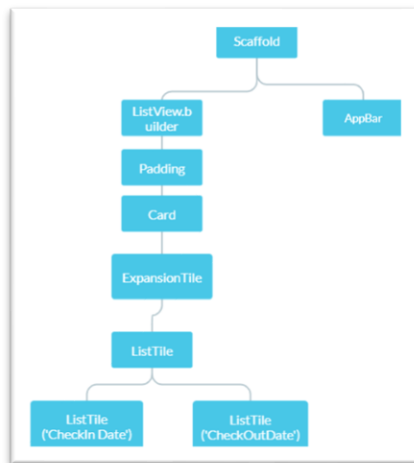
Firstbutton



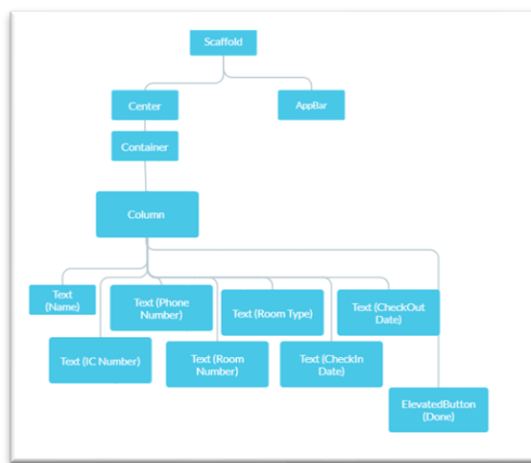
AddcontactPage



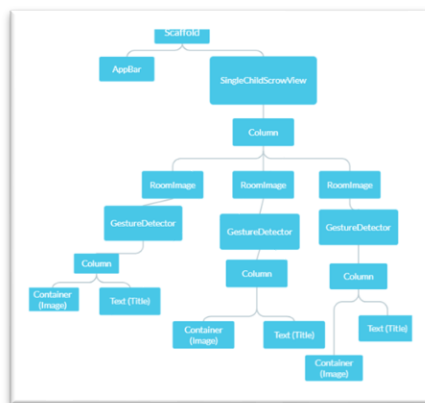
Already book



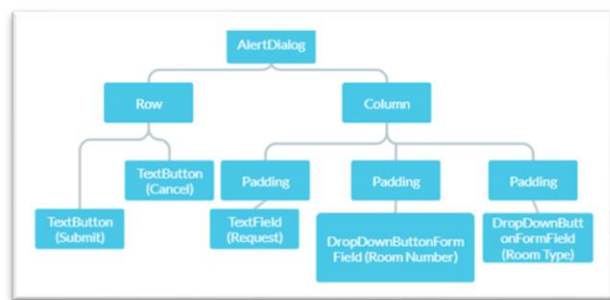
Reciept



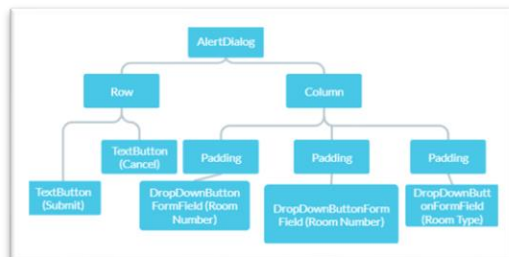
TypeOfRoom



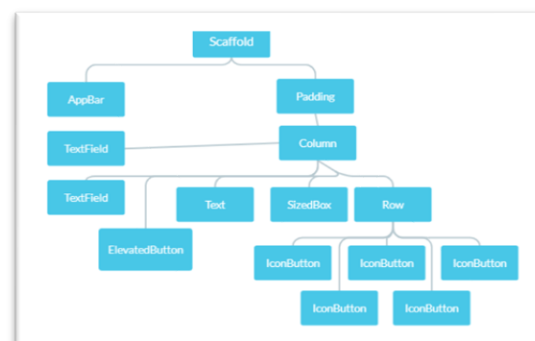
Roomservice(button)



HouseKeeping(button)



FeedBack



4. Flutter Widget and Features

```
// Show a snackbar to inform the user
ScaffoldMessenger.of(context).showSnackBar(
  SnackBar(
    content: Text('Booking successfully, Thank You'),
    duration: Duration(seconds: 30), // Set duration
    action: SnackBarAction(
      label: 'View Receipt',
      onPressed: () {
        Navigator.push(
          context,
          MaterialPageRoute(builder: (context) {
            return ReceiptPage(contact: widget.contacts.last);
          }), // MaterialPageRoute
        );
      },
    ), // SnackBarAction
  ), // SnackBar
);
```

When user have completed fill in the form, then this Snackbar will be pop up, but here there is 'view receipt' button provided to the user to see their receipt.

```
child: Card(
  child: ExpansionTile(
    title: Text(widget.contacts[index].roomNumber),
    subtitle: Text(widget.contacts[index].roomType),
    children: [
      ListTile(
        title:
          Text('CheckIn: ${widget.contacts[index].checkInDate}'),
      ), // ListTile
      ListTile(
        title: Text(
          'CheckOut: ${widget.contacts[index].checkOutDate}'), //
      ), // ListTile
    ],
    trailing: IconButton(
      icon: Icon(Icons.delete),
      onPressed: () {
        // TODO: Implement logic to delete the contact
        setState(() {
          widget.contacts.removeAt(index);
        });
      },
    ), // IconButton
  ), // ExpansionTile
), // Card
```

ExpansionTile is the widget that when user pressed it, it will expand and show the list of information.

```
body: SingleChildScrollView(
  child: Column(
    mainAxisAlignment: MainAxisAlignment.center,
    children: [
      RoomImage(
        imagePath: 'images/image1.png',
        title: 'Single Room',
        info:
          'INFORMATION\n• Size of room: 15m²\nSize of bed: 120cmx2
      ), // RoomImage
      RoomImage(
        imagePath: 'images/image2.png',
        title: 'Double Room',
        info:
          'INFORMATION\n• Size of room: 17m²\n• Size of bed: 160cm
      ), // RoomImage
      RoomImage(
        imagePath: 'images/image3.png',
        title: 'Twin Room',
        info:
          'INFORMATION\n• Size of room: 17m²\nSize of bed: 105cmx1
      ), // RoomImage
    ],
  ), // Column
), // SingleChildScrollView
```

This widget is a picture but when user pressed it, it will go into new page that show full information about the picture.

```
drawer: Drawer(
  child: ListView(
    padding: EdgeInsets.zero,
    children: <Widget>[
      const DrawerHeader(
        decoration: BoxDecoration(
          color: Color.fromARGB(255, 55, 59, 61),
        ), // BoxDecoration
        child: Text(
          'Login',
          style: TextStyle(
            color: Colors.white,
            fontSize: 24,
          ), // TextStyle
        ), // Text
      ), // DrawerHeader
      ListTile(
        title: const Text('Login'),
        onTap: () {
          // Navigate to login page
          Navigator.pushNamed(context, '/login');
        },
      ), // ListTile
    ], // <Widget>[]
  ), // ListView
), // Drawer
```

Drawer is the widget at the left screen. Users need to slide it to use. In this system, there is Login page at the Drawer.

5. Sample of Interface with Explanation

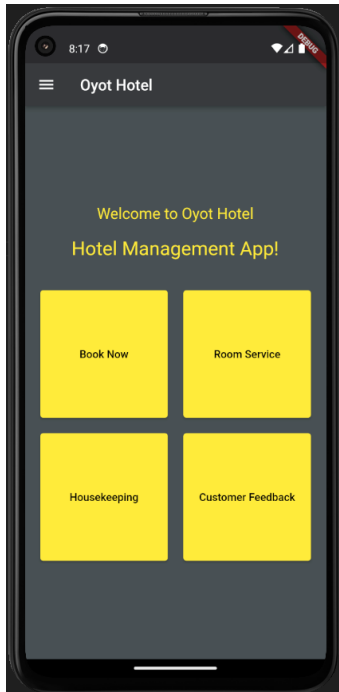


Figure 5.1

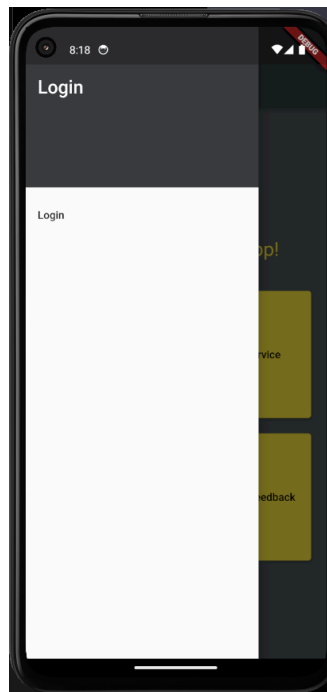


Figure 5.2

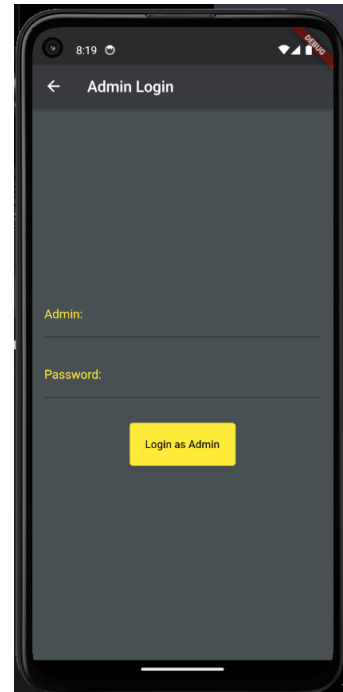


Figure 5.3

Figure 5.1 show the home button, there are 4 button at the home page and there is Login button(Figure 5.2) at the Drawer



Figure 5.4



Figure 5.5

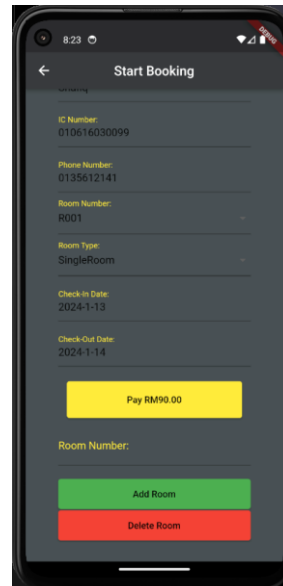


Figure 5.6

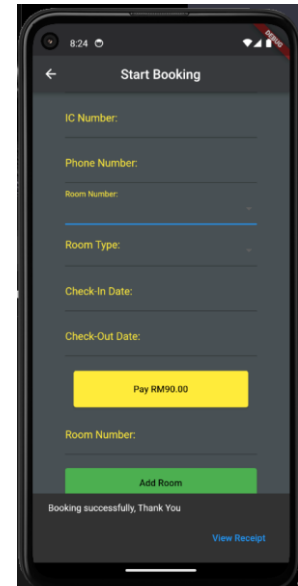


Figure 5.7

When user click 'book now' button, Figure 5.4 will be displayed. There are 3 buttons. Figure 5.5 show the Booking List page. If user pressed the room then it will show the date about that room. Figure 5.6 shown Start Booking page for user keep in information. After submitting snackbar shown (Figure 5.7) and user can see their receipt.



Figure 5.8

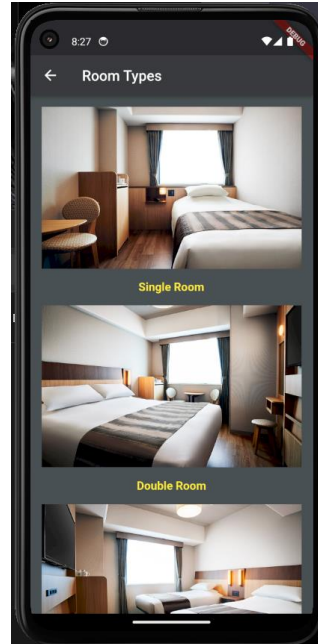


Figure 5.9

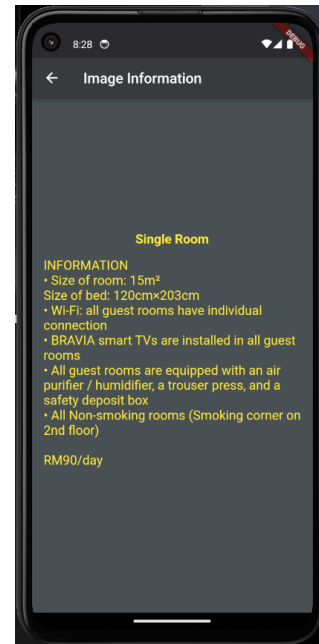


Figure 5.11

Figure 5.8 shown the receipt that user need to pay after booking confirmation. Figure 5.9 show type of room page that when user pressed the picture, the information will be shown (Figure5.11).

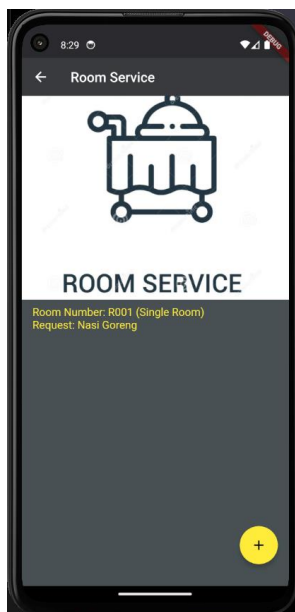


Figure 5.12

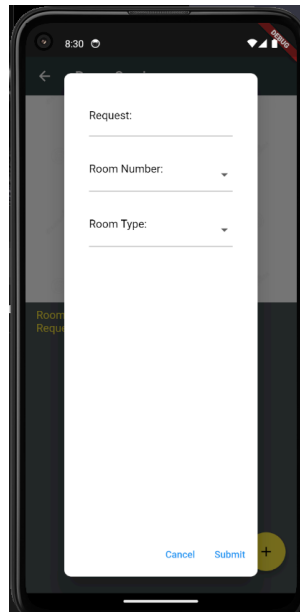


Figure 5.13



Figure 5.14

Figure 5.12show the room service page, user can request something like food or pillow from the hotel and Figure 5.13 show the process to fill it. Figure 5.14 show the house keeping page, user can request available type of cleaning to the hotel management.

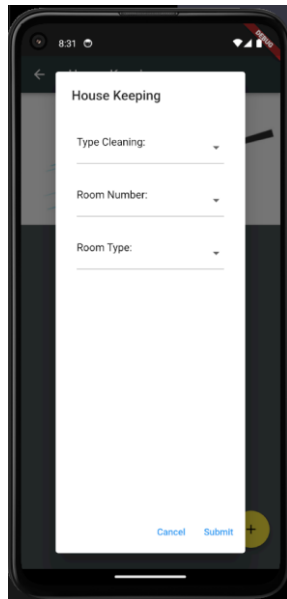


Figure 5.15

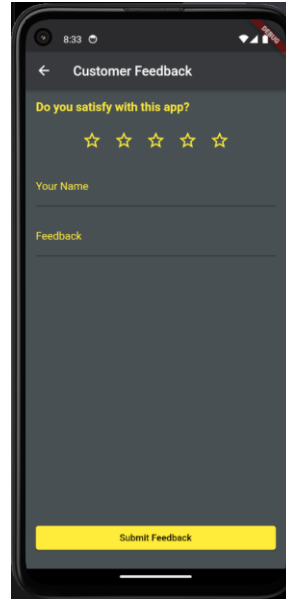


Figure 5.16

Figure 5.15 shows the page that user need to fill if their need servics of cleaning room. Figure 5.16 shows the page for user submitting their feedback to the management team.

6. Conclusion

In summary, ABC Technologies' Hotel Management App marks a pivotal advancement in the hospitality sector by seamlessly integrating innovative features to meet the evolving needs of modern travelers. The app's commitment to user-centric design, transparent cost breakdowns, and streamlined functionalities ensures a user-friendly experience, setting a new industry standard for accessible and intuitive hotel management.

Through rigorous prototyping and usability testing, ABC Technologies has fine-tuned the app's features, emphasizing continuous improvement and responsiveness to user feedback. As the Hotel Management App makes its debut on major app stores, ABC Technologies not only achieves its immediate business goals but also establishes itself as a technological trailblazer, poised to reshape the future of hotel services with a customer-centric and transformative approach.

7. References

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8. **GitHub :**

<https://github.com/apikader/FrameworkMobileDevelopment/tree/main/Project2>