SMART CAMPUS ASSISTANT – PROJECT REPORT (Dialogflow ES)

Student Name: Ankit Pradhan
CRN: 100389
School: Viraj International School
Course: IBCP – CRS Artificial Intelligence

---

1. Project Overview

The Smart Campus Assistant is a Dialogflow ES–based chatbot created to help students, teachers, parents, and visitors navigate the school campus efficiently. It offers fast and accurate responses on a variety of important topics.

The chatbot provides information about:

- **Academic departments**
- **Office locations**
- **School events**
- **Campus timings**
- **Transportation**
- **Rules and policies**
- **Cafeteria menu**
- **Sports facilities**
- **Admission queries**
- **Lost and found support**

The goal of this system is to reduce confusion, improve accessibility, and offer 24/7 virtual assistance to anyone on campus.

---

2. Project Objectives

The key objectives of this project are:

- **Understand real user needs through research**
- **Create user-focused intents and entities**
- **Implement slot-filling, parameters, and contexts**
- **Build natural and interactive conversations**
- **Test and refine chatbot responses**
- **Deploy the assistant for campus use**
- **Document the full project for IBCP assessment**

---

3. Intents (15 Total)

1. **Welcome Intent**
2. **DepartmentLocationIntent**
3. **EventInfoIntent**
4. **CampusTimingIntent**
5. **StaffOfficeIntent**
6. **RulesIntent**
7. **TransportIntent**
8. **EmergencyContactIntent**
9. **CafeteriaMenuIntent**
10. **LibraryHoursIntent**
11. **AdmissionQueryIntent**
12. **FeesIntent**
13. **SportsFacilityIntent**
14. **LostAndFoundIntent**
15. **Fallback Intent**

Each intent is designed to answer a specific type of query from the user.

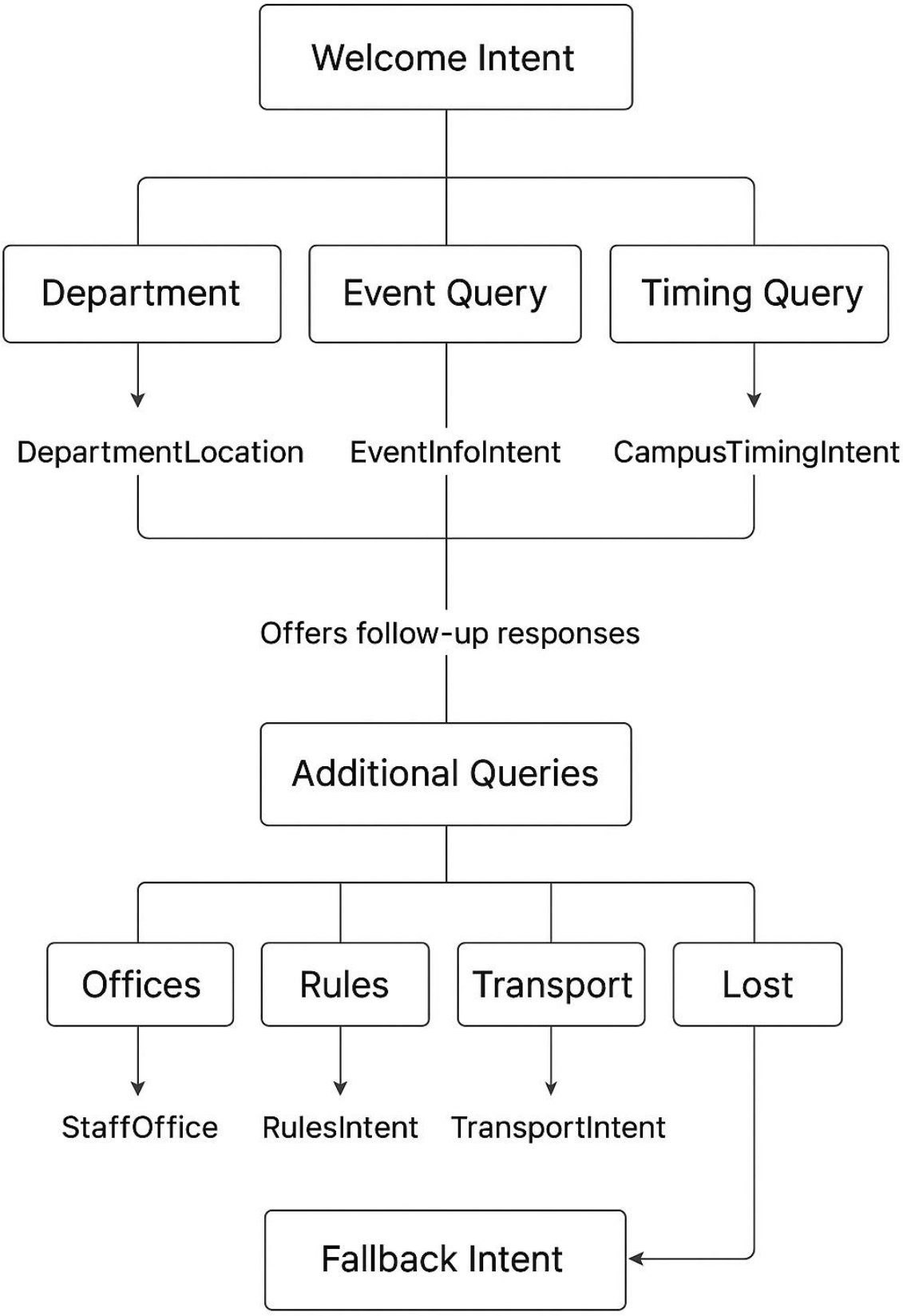
---

4. Entities (10 Total)

- **day_name**
- **department_name**
- **event_name**
- **faculty_role**
- **hostel_type**
- **location_name**
- **meal_type**
- **office_name**
- **rule_type**
- **transport_type**

These entities help Dialogflow extract important words from the user's message and give accurate responses using slot-filling.

5. Flowchart


Welcome Intent
Department
Event Query
Timing Query
DepartmentLocation
EventInfoIntent
CampusTimingIntent
Offers follow-up responses
Additional Queries
Offices
Rules
Transport
Lost
StaffOffice
RulesIntent
TransportIntent
Fallback Intent

6. Testing Scenarios

Scenario 1 – Department Query

User: “Where is the computer science department?”
Bot: Provides block + floor + directions
Status: PASS

Scenario 2 – Event Venue

User: “Where is today’s workshop?”
Bot: Shows Hall and location
Status: PASS

Scenario 3 – Cafeteria Menu

User: “What is available in cafeteria?”
Bot: Shows updated menu
Status: PASS

Scenario 4 – Transport Help

User: “Where is the bus stop?”
Bot: Provides exact location
Status: PASS

Scenario 5 – Lost Item

User: “I lost my ID card.”
Bot: Directs user to the Admin Office
Status: PASS

---

7. Deployment

The chatbot can be deployed using:

- **Dialogflow Web Demo**
- **Website iframe**
- **Android/iOS mobile application**
- **WhatsApp via Twilio**
- **QR Code–based access**

Deployment makes the chatbot accessible to teachers, students, and parents.

---

8. Conclusion

The Smart Campus Assistant chatbot improves campus communication by acting as a virtual helpdesk, offering fast, accurate, and useful information. It enhances user experience, reduces routine workload for staff, and supports students in navigating the campus with ease.

This project demonstrates skills in AI, natural language understanding, testing, and deployment—fulfilling the requirements of the IBCP – CRS Artificial Intelligence course.