UNIVERSITI TEKNOLOGI MALAYSIA SCHOOL OF COMPUTING, UTMJB
SEMESTER I, SESSION 2024/2025

ASSIGNMENT 2

SECJ 3553-08

Lecturer: Dr. Shafaatunnur Binti Hasan

Group: Bit Buddies

Title: **AI ChatBot Support for UTM Smart Application**

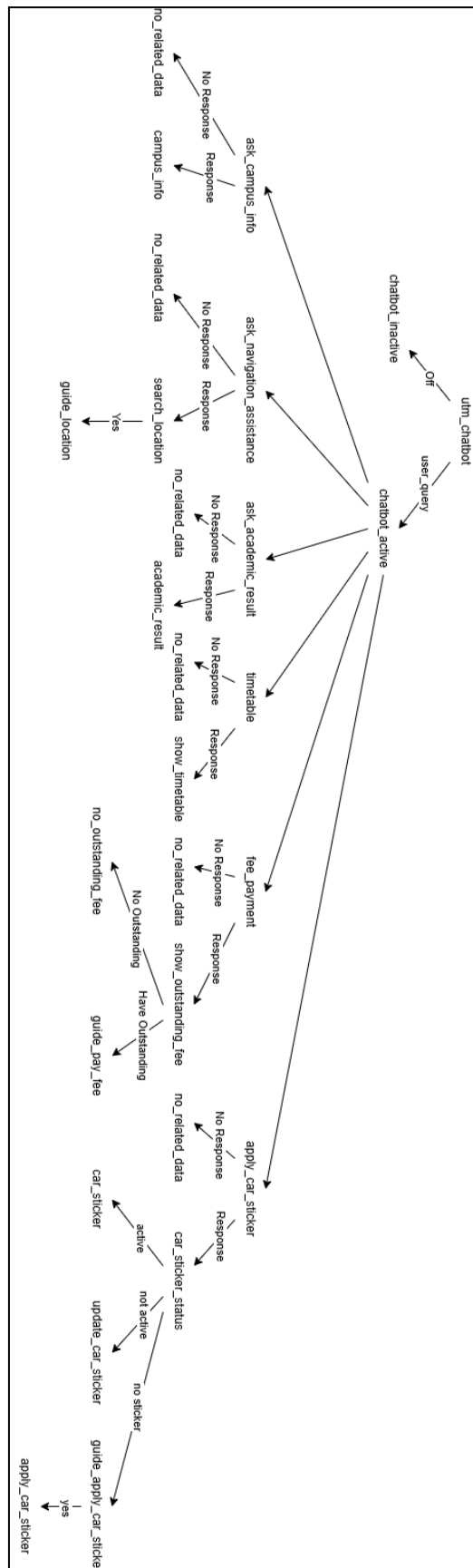| Names:	Matric Number:
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State Space Search

Figure 1.0 State Space Search Graph Of AI ChatBot Support for UTM Smart Application

Initial State = utm_chatbot

Actions = chatbot_active, ask_campus_info, ask_navigation_assistance, ask_academic_result, timetable, fee_payment, show_outstanding_fee, car_sticker_status, guide_apply_car_sticker

Goal State = campus_info, search_location, academic_result, show_timetable, guide_pay_fee, car_sticker, update_car_sticker, apply_car_sticker

Path Cost = Off, user_query, No Response, Response, Yes, No Outstanding, Have Outstanding, Active, not Active, No Sticker

Description

When UTM Chatbot is active, the user will ask the query, else it will be inactive. The user will have several options whether they want to ask about campus information, navigation building, academic results, timetable, outstanding balance and car sticker application else, it will be inactive. If the user chooses to ask about campus information, the chatbot will respond with campus information, else it will show no related data about campus information. If the user chooses to ask about navigation building, the user must insert the location input then the chatbot will show navigation to the building that user wants, else it will respond to no related data. If the user chooses to ask about academic results, the chatbot will show academic results, else it will show no related data. If the user chooses timetable, the chatbot will show the timetable, else it will show no related data. If the user chooses fee payment, the chatbot will show whether the user will have an outstanding balance or not, else it will show no related data. If the user does have an outstanding balance, the chatbot will show the payment guidance, else if it does not have outstanding, it will show no outstanding payment. If the user chooses car sticker application, the chatbot will show car sticker status. Whether it is active, not active and no sticker. If it is active then the car sticker is currently valid to be used. If it shows it is not active then the chatbot will ask the user to update the car sticker details, else the chatbot will guide the user to apply for car sticker for the first time. The chatbot will be inactive if it's not used.