2019 澳大手機應用程式 APP 設計比賽

2019 UM Mobile APP Development Competition

問題陳述

Problem Statements

每隊隊伍請從以下挑選一條問題作答。隊伍可以在問題基礎上進行拓展。

For each team, please select one of the following problems to solve. Teams can expand their ideas based on the problem selected.

問題#1　Problem #1

澳大人動起來　UM Fitness

澳大提供了各式各樣的運動設施，怎樣才能夠讓學生和教職員善用這些設施來建立一個健康的生活方式？推動大家持之以恆地鍛練是保持身體健康的關鍵。透過結合校園內可用的運動設施，你可開發一個移動應用程式為澳大人提供一些個人化的運動建議嗎？

例如：

- 利用性別、年齡、現時及目標體重、身高、運動喜好等建議運動計劃
- 線上邀請澳大人好友結伴一起做運動
- 利用課程時間表及運動設施的使用狀態，提供建議運動時間表及預約
- 利用天氣預測來建議使用室內或室外的設施
- 建立校內及校外的體育活動資料平台，使用者可在移動應用程式得知、查詢及即時報名參與各項體育活動

UM provides a variety of sports facilities. How can we promote active lifestyle in this campus by encouraging students and staff to make good use of those facilities? Motivation is the key to regular exercise toward fitness. Can you develop a mobile application to provide a personalized exercise recommendation by utilizing sports facilities provided by UM?

For example:

- Recommend an exercise plan by using user's gender, age, current and target weight, height and sports preference
- Invite UM members to do work out or play sports together
- Recommend an exercise schedule and facilities booking by incorporating student's course timetable and availability of the sports facilities
- Recommend indoor or outdoor facilities by incorporating weather forecast information
- Establishment of an on/off campus sports activities information platform that allows users to get to know, search or register for various sports activities through the APP

問題#2　Problem #2

澳大學生搵工易　UM Job Hunter

近年澳門經濟發展迅速，創造了很多就業機會，澳大也於每年邀請各公司及機構在校園舉辦招聘會。澳大為方便有需要的僱主和同學，提供了集兼職、全職和實習工作於一身的網上職位空缺系統 (http://isw.um.edu.mo/sjv/)。由於在平台上有很多職位空缺，而且涵蓋不同的專業範疇，學生往往需要用相當多的時間來篩選合適的工作職位。你可開發一個移動應用程式來讓學生更快捷和準確地接收到與其專業及興趣相關的招聘信息嗎? 例如：

- 學生可按預先設定的職位條件來接收最新發佈的職位通知，如教育程度、主修科目、期望薪酬及工作性質等
- 同學之間可以互相分享大家有興趣的招聘信息
- 讓學生在移動應用程式裡建立或滙入個人履歷，程式將根據履歷的內容來推薦工作職位給學生
- 僱主亦可透過移動應用程式按他們的要求尋找合適人才
- 建立校內及校外就業招聘活動的資料平台

In recent years, Macau's fast-growing economy has been creating a good number of job opportunities. UM organizes career fairs every year and invites different companies and organizations to participate. UM provides a convenient web application (http://isw.um.edu.mo/sjv/) for employers to recruit talents and for students to look for part-time jobs, full-time jobs and internship. It is often time consuming for students to search the right jobs as too many results of different job industries can be found in the platform. Can you develop a mobile application to help students to identify suitable job vacancies more quickly and accurately according to their academic qualifications and interest?

For example,

- Notification of job vacancies according to the student's qualification, major, expected salary, job nature, etc.
- Students can share the job vacancies that they are interested to other UM students
- Students can create or import resumes through the application which then recommends suitable jobs to students according to their resumes
- The employers can also search the right talents on the application by specifying their requirements
- Establishment of an on/off campus recruitment activities information platform.

問題#3　Problem #3

澳大智能用電　UM Smart Energy

為提高能源效益及建立綠色校園，找出能源效益問題是十分重要的。你可開發一個移動應用程式來讓我們更有效地管理電力消耗嗎？這個程式能支持以下全部或部份功能：

- 提供互動式及可視化的電力消耗數據並支持下列度量方式：
  - 各類電力消耗的數據（例如：日期、時間或電錶等）
  - 各類電力消耗數據的比較
  - 各類電力消耗數據的趨勢圖
- 省電監察的功能如下：
  - 設定各類電力消耗的一般用量及目標用量
  - 監察現時各類電力消耗的狀態
  - 當電力消耗將會達到或超過設定的用量時作出通知
- 使用不同的方法來預測電力消耗（例如：短期的預測、長期的預測等）

In order to improve energy efficiency for building a green campus, it is important to identify energy efficiency problems. Can you develop a mobile application to manage power consumption efficiently? This mobile application should support all of or some of the following functions:

- Interactive power consumption data visualization with the following metrics:
  - Power consumption by different measures (e.g. date, time, meter, etc.)
  - Comparison of power consumption by different measures
  - Trend of power consumption by different measures
- Power saving monitoring
  - Define the general consumption baseline and target consumption for different measures
  - Monitor the current consumption by different measures
  - Notification for reaching or exceeding the consumption
- Forecasting power consumption by different approaches (e.g. Short-term forecasting, Long-term forecasting, etc.)