Homework 07 – Intents

Due: Day 29 – April 18th, 2022 (beginning of class)

Objective:

The goal of this assignment is to gain experience with opening new Activities (i.e., "pages" or "screens") using both explicit and implicit Intents which we discussed this week.

Instructions:

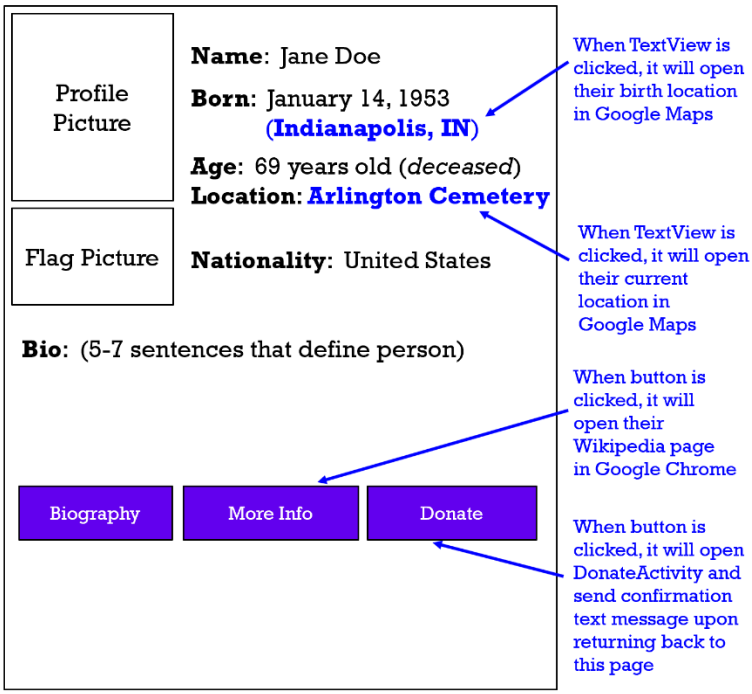
Started in 2004, April was officially selected as **Celebrate Diversity** month. Over the years, our Computer Science department at DePauw has been actively working to combat the national trend of underrepresentation among women, African American, Hispanic and Latinx, Asian American, and other marginalized and minority groups in STEM. It is important that we recognize and honor the incredible diversity that is a part of our field's history to inspire and create meaningful change in future generations of Computer Scientists (such as you!)

In this assignment, I would like for you to create a Biography app that highlights/showcases **a prominent Computer Scientist from a historically underrepresented group** (see list above).

Your app needs to work exactly as follows (i.e., the features/behavior listed below will be explicitly graded for this assignment). Important: The text in your submission must be written in your own words – do not copy-paste from websites as this will constitute plagiarism which will result in a failing grade on this assignment, grade reduction in the class, and an academic dishonesty report filed (per University policy). In addition, a portion of this assignment's grade is reserved for a clean, organized, and well-designed layout (think: if I were to show your app to a future employer, would you be proud of this reflecting your best work).

Activity #1 (HomeActivity)

- On the home page, your app needs to display the following information for your individual:



  - **Name** – Your selected individual's full legal name
  - **Born** – The date when your selected individual was born. Beneath the birthdate, a TextView with **blue text** should contain the location where your selected individual was born. When the user clicks this TextView, it should open and display the location in the Google Maps task
  - **Age** – The age of your selected individual today (please indicate if the individual is deceased)

- **Location** – The location where your selected individual is currently living today (or where the location where they are buried if deceased). This TextView should also have **blue text** and when the user clicks this TextView, it should open and display the location in the Google Maps task
- **Nationality** – The political nation that your selected individual associates/originates
- **Bio** – A brief 5-7 sentences that summarize/highlight your selected individual and their contribution(s) to the field of Computer Science
- **Biography button** – When the user clicks on the Biography button, it should cause the BiographyActivity (*discussed in the next section*) to be opened and displayed to the user
- **More Info button** – When the user clicks on the More Info button, it should cause your selected individual's Wikipedia page to be opened in the Google Chrome (i.e., web browser) task
- **Donate button** – When the user clicks on the Donate button, it should cause the DonateActivity (discusesd in an upcoming section) to be opened and displayed for the user to enter in payment information.
    - **Extremely Important**: After the user enters in their payment information on the DonateActivity page, their entered information must be returned back to this HomeActivity. Your **HomeActivity** (not DonateActivity) will create a receipt of this information as a text message (*described below*). Ensure that all implicit Intents are being created and sent only from your HomeActivity. This portion of the assignment was purposely created to cover specific topics that we discussed in class. Failure to design your app according to these specifications will result in a significant loss of points to this assignment's grade.

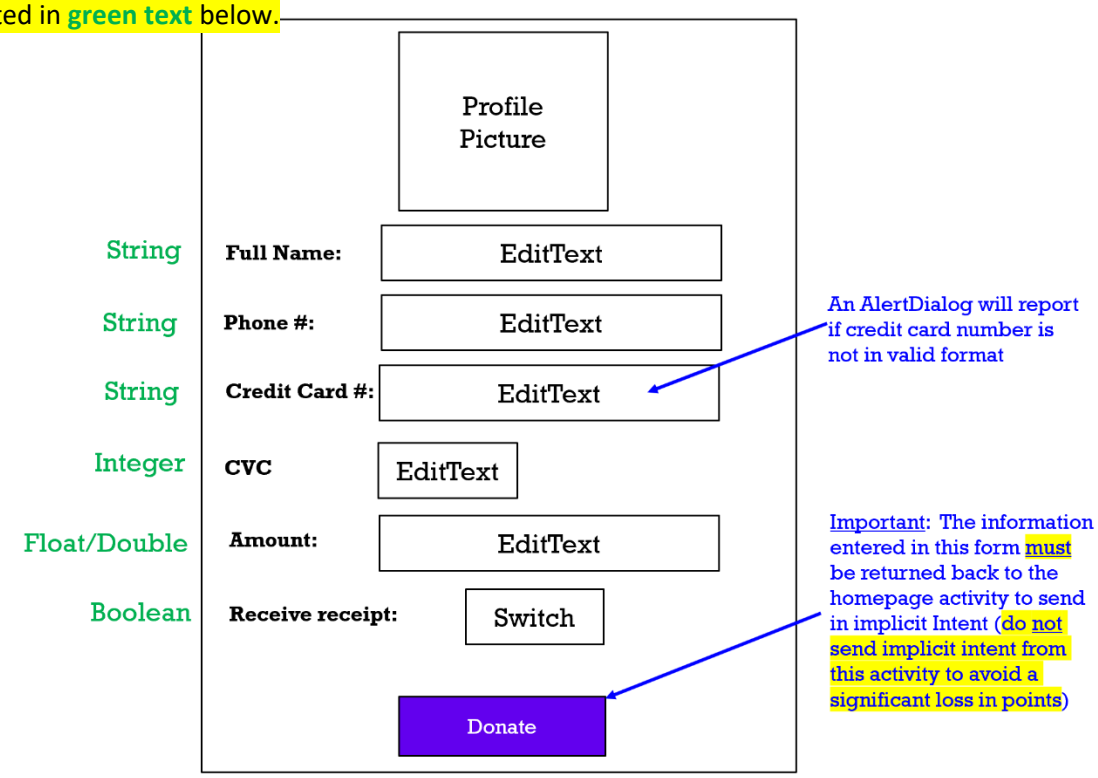
Activity #2 (BiographyActivity)

- On the BiographyActivity page, your app needs to display several sections of information for your individual discussed below. This page needs to contain enough content (e.g., text and images) that it is **scrollable** (i.e., points will be deducted if the page does not contain enough content to be scrollable but you should not add "filler" text/content just to use more space). In addition, a **divider** needs to be used to clearly/visibly separate each of the sections.

- **Early Life** – in this section, you should include 1-2 paragraphs that summarize your selected individual's early (childhood) life. These paragraphs should not be exhaustive or comprehensive to include every detail but simply several noteworthy events/achievements during their childhood.
- **Education** – in this section, you should include 1-2 paragraphs that summarize their educational background such as where they attended for their primary, undergraduate, graduate, etc. studies and the fields and degrees that they earned throughout their life.
- **Accomplishments** – in this section, you should include 1-2 paragraphs that summarize major accomplishments in your selected individual's life – **particularly, those that are relevant to the field of Computer Science** (i.e., what contributions did they make to Computer Science?).
- *(other sections)* – if there is another section that you wish to create to describe your selected individual, feel free to do so

Activity #3 (DonateActivity)

- On the DonateActivity page, your app needs to contain the following form fields for a user to enter information into:
  - **Profile Picture** – an image of the selected individual so that the user knows whose fund they will be donating money to
  - **Full Name** – an EditText for the user to enter their full name
  - **Phone #** - an EditText for the user to enter their 8-digit telephone number
  - **Credit Card #** - an EditText for the user to enter their 16-digit credit card number in a **specific format** where every 4 digits is separated by a **dash** (example: 1234-5678-8765-4321). If the user does not enter their credit card information in this specific format or if they do not enter enough digits, then your app **must** present an AlertDialog informing them of the error with an **OK** button that they must click on.
  - **CVC** – an EditText for the user to enter their 3-digit credit card verification code
  - **Amount** – an EditText for the user to enter the amount they wish to donate in dollars and cents (e.g., **25.75**)
  - **Receive receipt** – a Switch for whether the user wishes to be sent a text message receipt
  - **Donate** button – when pressed, this button should ensure the information is valid (according to specifications above) and if so, it **must** return all of this information to the HomeActivity as the **type** indicated in **green text** below.



- Once the information entered in the DonateActivity has been returned to HomeActivity, then the **HomeActivity** (not DonateActivity) will create a receipt of this information as a text message. The text message receipt should be created in the Google Message (i.e., text messaging) app to be sent to the phone number that the user entered and have the following message body:

  "Thank you **[Full Name]** for your donation of $ **[Amount]** using card number ending in **[***last 4 digits of* **Credit Card]**"

  Example:

  "Thank you **Chad Byers** for your donation of $ **100.25** using card number ending in **4824**"

Submission:

When you are finished, you must **zip** your Android Studio project. On Moodle, you should upload your zip file to the Homework 07 assignment box