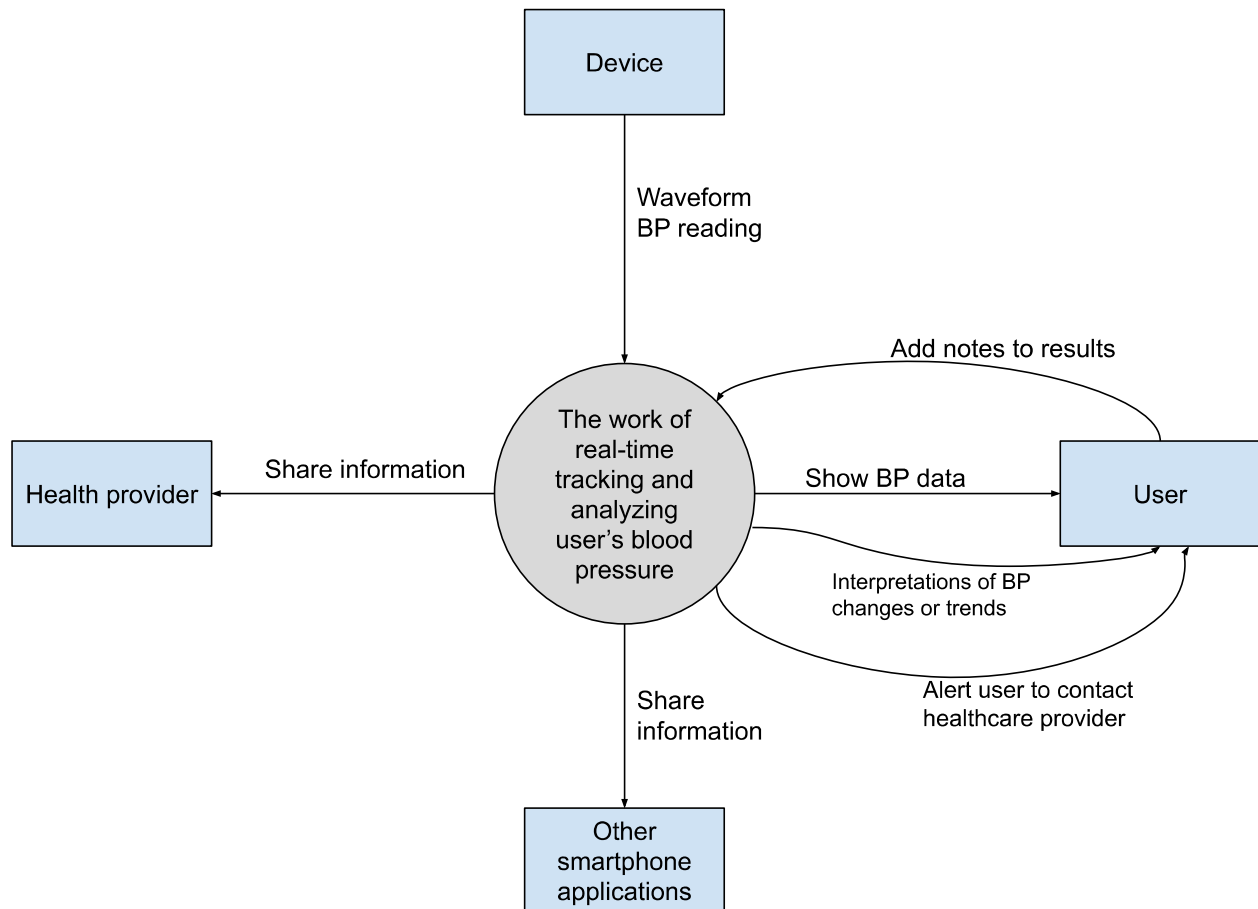


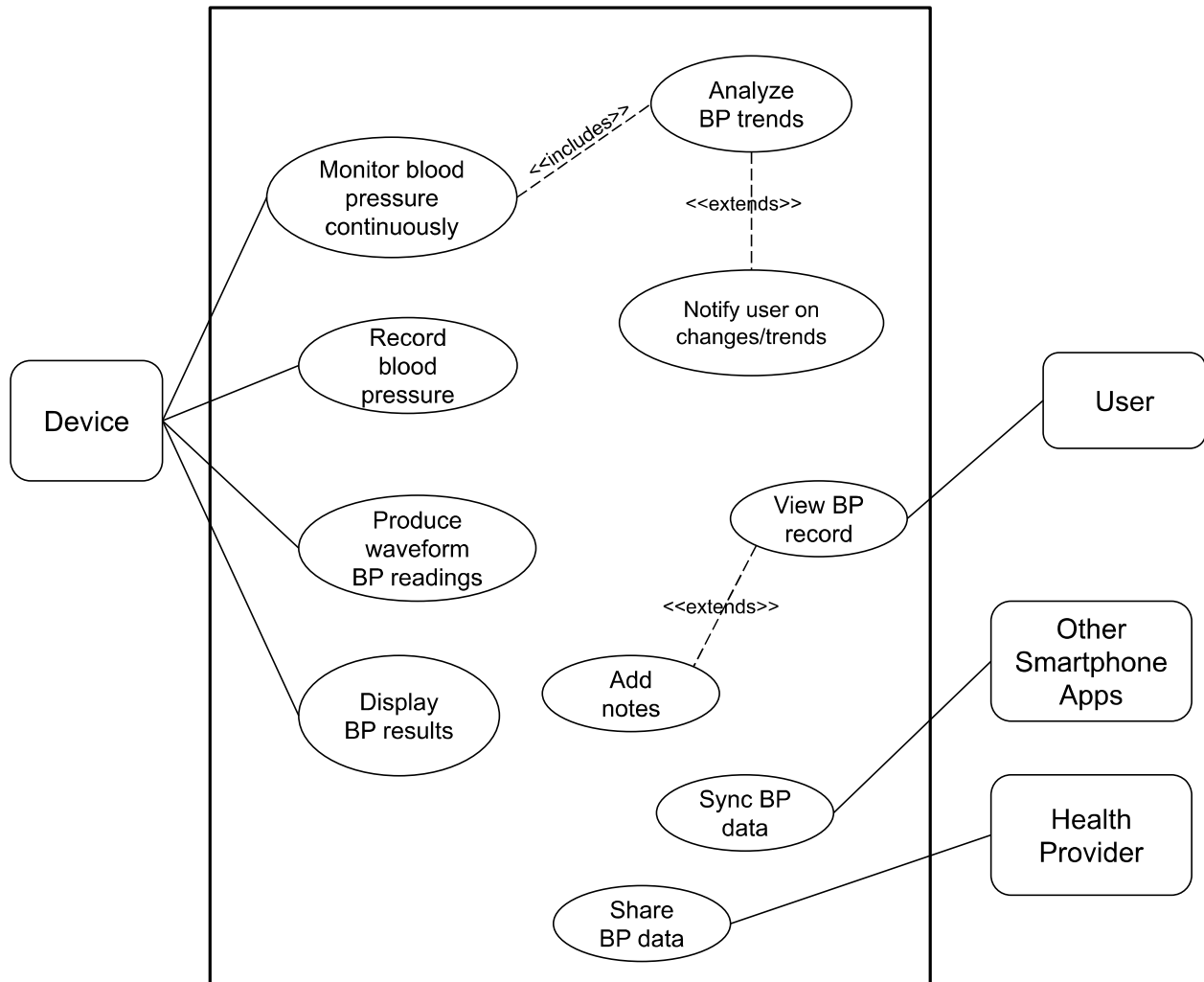
## ComS 4090: Homework 1

Group members: Michelle Loo, Amanda Friis, Gabriel Perez

### 1: Understanding The Context



## 2: Partitioning The Work



### 3: Gaining Knowledge Of The Domain

- I. How often will the bpMon software sync with the Device and other smartphone apps?
  - A. The software should sync in real-time with the Device to ensure continuous blood pressure monitoring. The frequency of syncing with other smartphone apps should occur periodically, and be configured by the user.
- II. What smartphone OSes will bpMon need to communicate with?
  - A. BpMon will need to be able to communicate with both Android and IOS devices.
- III. Will bpMon have to store information about the user's physical health (height, weight, age, medications, underlying health issues, etc)?
  - A. Yes, bpMon will have to first get this information so it can determine what an acceptable range of blood pressure is.
- IV. Will bpMon need to be designed with security in mind?
  - A. Since bpMon will be storing sensitive personal information, it will need to be designed to ensure security so no information might get leaked.
- V. When should our work notify the user to visit a healthcare provider?
  - A. The work should look at multiple trends that would all point to needing to visit a healthcare provider. One reason the work should notify the user is if there has been a trend of increased blood pressure. Getting early treatment for high blood pressure will decrease the risk of cardiovascular problems for the user.
  - B. The work could also notify the user to visit a healthcare provider if their blood pressure is rapidly changing. Labile hypertension can also lead to poor cardiovascular health.
- VI. When are they using this device?
  - A. The user's blood pressure will naturally be higher in the morning and lower in the afternoon and evening. This is something the work could consider when keeping track of trends.
- VII. Should the work consider environmental factors?
  - A. Blood pressure can be affected by many factors like sodium intake, physical inactivity, alcohol/tobacco intake, air pollution, stress, etc.
  - B. Our work could ignore these factors and simply find a baseline for each individual user. It could also consider these factors and adjust how it tracks trends accordingly.
- VIII. How does our client hope to benefit from the work?
  - A. The work has one benefit of providing real-time information to the client. This can benefit our client by saving time from bringing in the users to measure blood pressure in-office.

- B. It can also benefit our client by providing much more information about the user. This will improve quality of care by giving the client a way to analyze ongoing trends.

#### 4: Roles

- Customer interface: Michelle Loo
- Project lead:
- Domain expert: Amanda Friis
- Quality assurance: Gabriel Perez