Risk Analysis

I. General Information

Project name: Android Bar Code Scanner App
Date: <u>2019-01-20</u>   Team Member(s):Hao Ye___

II. Project Risks: Identify risks

- **Technical risks** (related to using a particular technology)
  Resources are inexperienced
  Since some of our team member is new to the topic and may make mistakes and not productive. We have to keep study and reading the related files.

  Performance Unexpected
  The project will use outsource technology, we have an expectation of the result but we cannot make sure we have enough skills to achieve our result.

- **Project management risks**
  Cost forecasts are inaccurate
  Inaccurate cost estimates and forecasts. Because all the team member has no experience with building a Android application with database connection and it will be our first database related project, it's hard to make estimation. We will need help from our stakeholder and plan in advance.

  Unexpected error or result
  During the development or tuning process, lots of error and unsatisfied result may occur, we need to prepare enough time for all this possible situation

- **Organizational risks**
  Communication overhead
  The communication time cost between members of the project might be high. It may take time for idea exchange process on one single problem.

  Lack of support documents and resources
  The documentation we can look at is online and some support forums. Sometimes, we may not be able to find out the resource we want, so we need to be able to solve some problem by ourselves.

- **Constraint risks**
  Technology components aren't extensible or reliable
  Components that are difficult to extend with new functions and maybe update very often which is hard to keep track of the change of the original library. We have to keep a track on the update of the code.

- **Business risks**

Delays to machine and test data approvals impact the project
The risk of delays to test data and machine approvals may occur since we need a huge set of data for the program and we need a machine to run the whole process, the delay may occur.

- **External risks**

  Low team motivation
  Your team lacks motivation. Especially this is a long running projects and everything have to start from scratch. We have to be passion to learn new things.

  Lack of communication
  The whole team have six team members, we have to find out a way for effective communication.

Risk Likelihood

Technical Risks: the likelihood of any risk under this category is between 0-10% because our project may not need maintenance as it is a "one time" project and we can find online resources.

Project Management Risks: there is 10-20% chances of any form of poor prioritization because our top priorities were all the functional requirements for this project. But since we are working on a new topic and using new technology we never used before, this will rise the chance of the risk.

Organizational risks: there is 0-10% chances of the lack of communication and resources. There is only one stakeholder during the development, this will lower the chance of the risk and all of our developer are skilled programmer, we can find ways to solve the problem.

Constraints Risks: there is 0-30% chances of any form of constraint risk because we do not have any access to the out-source library. If the extension is required, we have to do it by ourselves.

Business risks: there is 0-10% chance of any form of business risk because the project is not built for commercial usage. We will have all test data by the start of the project, this will lower the chance of the risks too.

External Risks: there is 0-10% chance of any form of external risk because all of our developer is interested in this topic and project, we will try our best to finish it and this will help to lower the chance of the risk.

Impact and Contingency Plan

Risk Category	Risk	Impact and Contingency Plan

Technical Risk	Resources are inexperienced	If we don't get familiar with the Android development, or we are not well prepared before the implementation step, or we can not find enough resources or help to solve our problem, the technical risk may cause the delay of the deploy of the project or even we can not finish it. We must learn and read these new technologies before programming since there is no substitute.
	Performance Unexpected	If we are unfamiliar with all material and resources, this could happen. The main priority is to get familiar with the material and we need enough time for tuning.
Project Management Risk	Cost forecasts are inaccurate	We are not able to estimate the cost of time of each step, this might affect the deploy..
	Unexpected error or result	This will cause the failure of the project. We need to allocate enough time for update and tuning process.
Organizational Risk	Communication overhead	This will lead to the project goal unclear. We have to follow with the direction from professor and update the process biweekly.
	Lack of support documents and resources	Some functions may not be able to achieve. We need enough time to try to solve it by ourselves and also keep checking the possible new resources.
Constraint Risk	Technology components aren't extensible or reliable	Some function may not be able to implement. Use other high quality unlicensed or free resources if we can find a better substitute.
Business Risk	Delays to machine and test data approvals impact the project	If we missed test data, we can not do the test on our program so the success can not bee justified. We need to use some other test data.
External Risk	Low team motivation	Nobody wants to work on the project. The whole project may not be able to finish. Use more than one way to communicate other than email.

	Lack of communication	Can not track the updates of the whole project and can not get the new goal. Other than regular meeting, use email or phone for the updates.