# Deliverable 1:
# Helping Hands: Feasibility Analysis

University of Maryland, Baltimore County

Shiva Sharma
IS436

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**Team Members:**
Timnit Tesfatsion
Daniel Bae
Briana Jenkins
Wonjin(James) Choi
Anusha Malla
Haythem Abdelkhalek

## Helping Hands Executive Summary

Our group have made this feasibility analysis for Helping Hands.

**Technical Feasibility:**

What kind of Risks (low, medium, high)

- Familiarity
    - Medium to high risk since only one member of the team worked on apps before.
    - We have a member that have worked on GUI development at a university course, in order to implement an app.
    - Low risk for familiarity since the current system is being used.

- Project size
    - Will take 3-5 months
    - Low risk because it'll be slowly implemented. Not a massive project.
    - Medium to high risk with how the UMBC system will integrate with the tutoring as well as managing the system.

- Compatibility
    - Medium to High Risk : Have to rely on data by manual implementations… StudyTree may not provide existing data, but the data is somewhat public. Once data is inserted the system will work fine.
    - Low Risk since system can run by itself when data is implemented.

**Economic Feasibility:**

Based on cost-benefit analysis calculations (see Cost-benefit Tables below). The estimations shows that Helping Hands App will increase UMBC's performance in its tutoring system.

- ROI over 12 months: 70%
- NPV over 12 months: $6991
- Break-even occurs after 1.26 years

What are the economical benefits of our app?

- Elevated customer satisfaction which would increase application purchase
- Lower cost maintaining local app
- Increase in the number of students who may not know about this service, potentially increasing revenue.
- Chance for competition and expansion of app to other universities

- Create jobs for students and other staff members

**Organizational Feasibility:**

What kind of risk does this app pose to umbc?

- It can pose a low risk if the supervisor is liking the idea and thinks it can be beneficial
- It can pose as high risk if they think they already have an alternative option and thinks it will be a little use to them
- Servers going down or not working properly
- Another low risk is having the issue that if a student does not show up the tutor still get paid so in that case on the economic part of it, it will cause money loss

Does the supervisor of our project have interest? What kind? Expectations?

- Supervisor needs faster support for schedule changes.
- They need instant ability to add new tutors to the system.

What kind of reaction/feedback are we expecting from the feature user of our app? What about the concerns they might have? Challenges/competitions?

- That it would be easier for the students to operate when wanting to schedule or reschedule for tutoring
- It would become easier for the students to be able to cancel, update or stay in contact with tutors
- Having the ability to use the app easily
- Make it easier for them so that they can talk to friends about the app and then we can get many more students to use it more often

**Additional Comments:**

How do we (group members) see this project?

- This project has a profitable app because all students will have access to it
- Opportunity for students to create a service that enables other students to do better in specific courses that are difficult

What are our expectations of doing this app?

- Increase student awareness on a potential service that could potentially increase a students grade.
- Individual and unique learning experience.
- Easier scheduling process for all participating parties

Do we think our app will be well accepted?

- It will be accepted because all students need a helping hand and the app helps to get to that point
- The app helps with finding a tutor faster and easily
- This app will help in time flexibility

Any challenges we might face whether technical or anything else?

- The coding might be a little tricky
- Getting all of the universities to buy the app might take some time

**Cost-Benefit Analysis - Simple Cash Flow Method**

| | 4 months | 8 months | 12 months | Total |
|---|---|---|---|---|
| **Benefits**<br>● Increase in the number of users<br>● Reduction in number of phone-calls for support from supervisors<br>● Reduced number of emails between<br>○ Supervisor and developers<br>○ Tutors and supervisor<br>○ Students and supervisor | | 5800<br>300<br>1480 | 6960<br>360<br>1776 | 12760<br>660<br>3256 |
| **Total Benefits** | | 7580 | 9096 | 16676 |
| **Development Cost**<br>● Server<br>● Software licences<br>● Server software | 100<br>100<br>100 | 0<br>0<br>0 | 0<br>0<br>0 | 100<br>100<br>100 |
| **Total Development Cost** | 300 | 0 | 0 | 300 |
| **Operational Cost**<br>● Software update/maintenance<br>● Communication charges<br>● Operational charges | | 50<br>200<br>4000 | 80<br>400<br>4500 | 130<br>600<br>8500 |
| **Total Operational Costs** | | 4250 | 4980 | 9230 |
| **Total Costs** | 300 | 4250 | 4980 | 9530 |

| | | | | |
|---|---|---|---|---|
| **Total Benefits - Total Costs** | (300) | 3330 | 4116 | 7146 |
| **Cumulative Net Cash Flow** | (300) | (200) | 7146 | |
| **Return on Investment (ROI)** | 70% (7146/ 9530) | | | |
| **Break-even Point** | 1.26 years | | | |

**Cost-Benefit Analysis - Discount Cash Flow Method:**

| | 4 months | 8 months | 12 months | Total |
|---|---|---|---|---|
| **Benefits**<br>● Increase in the number of users<br>● Reduction in number of phone-calls for support from supervisors<br>● Reduced number of emails between<br>○ Supervisor and developers<br>○ Tutors and supervisor<br>○ Students and supervisor | | 5800<br>300<br>1480 | 6960<br>360<br>1776 | |
| **Total Benefits** | | 7580 | 9096 | |
| **Present Value Total Benefits** | | 7343 | 8536 | 15879 |
| **Development Cost**<br>● Server<br>● Software licences<br>● Server software | 100<br>100<br>100 | 0<br>0<br>0 | 0<br>0<br>0 | |

| | | | | |
|---|---|---|---|---|
| **Total Development Cost** | 300 | 0 | 0 | |
| **Operational Cost**<br>● Software update/maintenance<br>● Communication charges<br>● Operational charges | | 50<br>200<br>4000 | 80<br>400<br>4500 | 130<br>600<br>8500 |
| **Total Operational Costs** | | 4250 | 4980 | 9230 |
| **Total Costs** | 300 | 4250 | 4980 | 9530 |
| **Present Value Total Cost** | 300 | 4117 | 4671 | 9088 |
| **NPV (PV Total Benefits - PV Total Costs)** | | | | 6791 |