



# American International University-Bangladesh (AIUB)

## Department of Computer Science Faculty of Science & Technology (FST)

### Crime Reporting and Safety

A Software Engineering Project Submitted

By Group 03, Section - H

Semester: Summer_23_24		Section:	Group Number:	
SN	Student Name	Student ID	Contribution (CO3+CO4)	Individual Marks
1	Foysal Munsy	22-47225-1		
2	Ananna Monjur	22-47243-1		
3	Abu Nayem Md. Arman	22-47249-1		
4	Brishav Mondal	22-47278-1		
5	Tasik Ahmed	22-47258-1		

The project will be evaluated for the following Course Outcomes

<b>CO3:</b> <i>Select</i> appropriate software engineering models, project management roles and their associated skills for the complex software engineering project and evaluate the sustainability of developed software, taking into consideration the societal and environmental aspects	Total Marks	
	Appropriate Process Model Selection and Argumentation with Evidence	[5 Marks]
	Evidence of Argumentation regarding process model selection	[5Marks]
	Analysis the impact of societal, health, safety, legal and cultural issues	[5Marks]
<b>CO4:</b> <i>Develop</i> project management plan to manage software engineering projects following the principles of engineering management and economic decision process	Submission, Defense, Completeness, Spelling, grammar and Organization of the Project report	[5Marks]
	Total Marks	
	Develop the project plan, its components of the proposed software products	[5Marks]
	Identify all the activities/tasks related to project management and categorize them within the WBS structure. Perform detailed effort estimation correspond with the WBS and schedule the activities with resources	[5Marks]
	Identify all the potential risks in your project and prioritize them to overcome these risk factors.	[5Marks]

## Risk Management

Risks	Category	Probability	Impact	RMMM
Size estimate may be significantly low	PS	60%	2	<p>Mitigation: Use expert judgment and historical data for better estimation.</p> <p>Monitoring: Regularly review task progress against estimates. Management: Adjust scope and timelines based on revised estimates.</p>
Larger number of users than planned	PS	30%	3	<p>Mitigation: Design scalable system architectures.</p> <p>Monitoring: Keep track of user registration and activity.</p> <p>Management: Increase server capacity and optimize software.</p>
Less reuse than planned	PS	70%	2	<p>Mitigation: Promote modular design. Monitoring: Track code reuse metrics. Management: Allocate time for refactoring and module generalization.</p>
End-users resist system	BU	40%	3	<p>Mitigation: Involve users early in requirement and design phases. Monitoring: Gather user feedback frequently.</p> <p>Management: Conduct usability enhancements based on feedback.</p>

Delivery deadline will be tightened	BU	50%	2	<p>Mitigation: Add buffer periods in the schedule.</p> <p>Monitoring: Regular milestone reviews.</p> <p>Management: Re- prioritize features based on available time.</p>
Funding will be lost	CU	40%	1	<p>Mitigation: Secure funding agreements and explore contingency funds.</p> <p>Monitoring: Regular financial health checks.</p> <p>Management: Scale project scope based on available budget.</p>
Customer will change requirements	PS	80%	2	<p>Mitigation: Use agile methods to accommodate changes.</p> <p>Monitoring: Regularly review changes and their impacts.</p> <p>Management: Formal change control processes and re-estimation.</p>
Technology will not meet expectations	TE	30%	1	<p>Mitigation: Conduct early prototype testing.</p> <p>Monitoring: Continual technology performance evaluations.</p> <p>Management: Have backup technologies and vendors in case of failure.</p>

Lack of training on tools	DE	80%	3	<p>Mitigation: Schedule regular training sessions.</p> <p>Monitoring: Assess team competency levels. Management:</p> <p>Provide resources for ongoing education and support.</p>
Staff inexperienced	ST	30%	2	<p>Mitigation: Mix teams with junior and senior developers.</p> <p>Monitoring: Review work quality regularly.</p> <p>Management:</p> <p>Provide mentorship and further training.</p>
Staff turnover will be high	ST	60%	2	<p>Mitigation: Enhance job satisfaction and work environment.</p> <p>Monitoring: Keep track of staff morale and turnover rates. Management:</p> <p>Prepare for quick replacements and knowledge transfer.</p>
Integration complexities	TE	60%	2	<p>Mitigation: Design integration tests early. Monitoring:</p> <p>Regular integration testing sessions.</p> <p>Management: Allocate extra time and resources for potential integration issues.</p>

Legal and compliance issues	BU	25%	2	Mitigation: Consult compliance experts during design.  Monitoring: Regular compliance reviews. Management: Adjust project practices based on legal advice.
Data security breaches	TE	50%	1	Mitigation: Implement robust security protocols. Monitoring: Conduct regular security audits.  Management: Immediate response team for breaches.
Hardware failures	TE	30%	3	Mitigation: Use high-quality, redundant hardware.  Monitoring: Regular hardware checks. Management: Quick hardware replacement strategy.

Impact Values

- 1. Catastrophic
- 2. Critical
- 3. Marginal
- 4. Negligible
- 5. The work product is called a Risk Mitigation, Monitoring, And Management plan (RMMM)

Allocation

Project Management

- **Project Manager:** Oversees the entire project, ensuring proper planning, coordination, and stakeholder communication.

## Development Team

- **Crime Reporting System Developer:** Develops the software for reporting crimes, including user interfaces and backend systems.
- **Database Administrator:** Manages the database of crime reports and safety data.
- **Mobile App Developer:** Creates a mobile application for users to report crimes and access safety information.
- **UI/UX Designer:** Designs user-friendly web and mobile application interfaces.
- **Security Specialist:** Ensures that the system is secure and that user data is protected.

## Testing and Quality Assurance

- **QA Lead:** Leads the testing efforts to ensure the crime reporting system functions correctly and securely.
- **Test Analyst:** Writes and executes test cases for both functional and non-functional requirements.
- **QA Engineers:** Assist in executing tests and tracking defects.

## Deployment and Maintenance

- **Deployment Manager:** Plans and coordinates the deployment of the crime reporting system.
- **System Administrators:** Maintain the server infrastructure and ensure system uptime.
- **Deployment Engineers:** Assist in deployment activities and software updates.

## Customer Support and Training

- **Training Specialist:** Develops user guides and conducts training sessions for law enforcement and community users.
- **Support Engineers:** Provide ongoing support, address user feedback, and resolve issues.