

## Problem Solving (A3) Report

**Topic:** Project organization website for groups of Scholars.

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1. Identify a Problem	PLAN
<p>At the event of the necessity to work in teams, without the benefit of being able to work in person, there is a need for a way to communicate information between members of a team as efficiently as possible.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p>The efficiency will dictate the usefulness of the program.</p> </div> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p>The need to share and communicate information within a team of scholars, developers, etc.</p> </div> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p>An aesthetic working environment that can suite various personalities and personal preferences.</p> </div> </div> <div style="border: 1px solid black; padding: 5px; width: 40%; margin: 10px auto;"> <p>End to end encryption to assure messages will not be intercepted, and allow the possibility for anonymous contributions between members of a team.</p> </div>	

2. Set the Target	PLAN
<ul style="list-style-type: none"> <li>- Offer a service that allows public and private file sharing between members.</li> <li>- A public chat and a private chat for members to discuss.</li> <li>- Give tools to users that help expand upon ideas, such as adding on top of a suggestion.</li> <li>- Give users the ability to anonymously suggest ideas.</li> <li>- Have a feature that shares common classes within members.</li> </ul>	

3. Analyze the Causes	PLAN
<ul style="list-style-type: none"> <li>-The ability for anonymous messages may require some form of advanced encryption.</li> <li>-Excessive file sharing may cause extensive loss in storage.</li> </ul>	

4. Propose & Implement Countermeasures	PLAN/DO
<ul style="list-style-type: none"> <li>- To anonymously send messages, let the server lose specific information about the message before sending it.</li> <li>- File sharing should hold a limit for the size of the file and require compressed files.</li> <li>-</li> </ul> <div style="display: flex; justify-content: space-between; background-color: #f9cb9c; padding: 10px;"> <div style="width: 30%;"> <p><b>PROBLEM</b></p> <p>The database that stores all the information for the program is consuming large amounts of storage space.</p> <p>At the same time, the encryption for the messages are very basic and serve little to no protection against novices who wish to steal information.</p> </div> <div style="width: 30%;"> <p><b>CAUSE</b></p> <p>The maximum file size a user can send is not restricted to any amount.</p> <p>Amateur level encryption is used to send data.</p> </div> <div style="width: 30%;"> <p><b>COUNTER MEASURE</b></p> <p>Restrict the maximum file size a user can send, and suggest for big files to be compressed before sending them.</p> <p>Use an existing protocol or encryption already available in order to secure messages.</p> </div> </div>	

5. Check/Evaluate	CHECK
<p><b>ASK:</b></p> <ul style="list-style-type: none"> <li>• Did the countermeasures work?</li> <li>• Was the target achieved</li> <li>• Can I verify that the Root Cause was eliminated (can I turn it off &amp; on)?</li> <li>• If the Countermeasure was not effective, why didn't it work</li> </ul> <p><b>SHOW:</b> The results; describe the reliability of the new process</p> <p><b>TOOLS:</b> Line graph, pareto</p>	

6. Act and/or Standardize	ACT
<p><b>ASK:</b></p> <ul style="list-style-type: none"> <li>• How will we ensure the process continues to work (stays solved)?</li> <li>• What have we learned?</li> <li>• Where else can we apply this learning?</li> </ul> <p><b>SHOW:</b> New or changed procedures, plans to apply learning in other areas</p>	

