Online Assignment Submission & Feedback System

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INTRODUCTION

In current tech era, technology has been taken almost all the necessary steps which was used to be done by human. Almost all the equipment has become automated with the help of advanced technology. We live in a world where technology is having great impact from corporate life to our personal life. Even in small retail shop to giant one all the paper works has been replaced with fully automated system to make it more user friendly. If we look to the education sector we can see some of the universities having their own system for the students where students can communicate with their lecturers by sending messages or files from home and abroad.

In this assignment the project I am going to develop is an online assignment submission and feedback system. The name of this project is "**UNISYS**". This system will allow students to submit their assignments from home and abroad and also able to send feedback regarding lecturer's performance. On the other hand lecturer can also provide the feedback regarding the assignment issues for each students through this system. So students from anywhere can receive the feedback through the system at any time.

To be added, I am going to implement data mining techniques into the system so that the system will be able to differentiate the positive and negative feedback by analyzing the keywords.

With the help of this data mining technique, admin panel of the university will be able to know whether the lecturers are completing their tasks fully or not because at the end bad lecturing will have a negative impact on the reputation of the university.

As this system will reduce the wastage of time, students those are studying in the university will give a word of mouth which will later encourage other students to come and join the university as well. Besides, the feedback system will make the lecturers aware of their duties which will force them to give their best for the students. This way the university will be able to provide high quality education. Moreover, students from local and international will come and join the University for Better Education which will boost up their (University) profit margin in future.

PROBLEM STATEMENT

Now-a-days most of the universities following the current system in case of student's assignments submission. Students need to print their assignments, bind it and submit it with the soft copy to admin office which is completely time consuming. Besides, to submit the assignments hard copy they need to provide the Feedback Form where they usually write down their details (Student ID No., Intake Code, Name) along with the assignments details (Module Code, Title, Lecturers Name, Due Date) which is nothing more than consuming their important times. Moreover, some universities having separate campus for assignment submission. As a matter of fact students need to go there for submitting their assignments as well.

On the contrary, regarding the students feedback issue some of the universities doesn't allow students to give feedback about the quality of the lecturer as well as their duties which they are abide by. Besides, it is difficult for the lecturer to provide feedback on paper to individual students as there is a less space on paper to point out the students fault regarding their individual and group assignments.

PROBLEM BACKGROUND

As the universities are following the old system regarding the assignments submission, students are facing some troubles while following the system.

Wasting Money

As we described early that students need to print and bind their assignments, so following this methods students need to spend much money for printing, binding and buying CD to make a soft copy of their assignments which also consider as wastage of their pocket money indeed. Sometimes, students need to buy Feedback Form from admin department which is expensive. Currently the price of the paper has already been increased, so most of the printing stations charging high compare to previous time which is not affordable for students coming from average income family background. As a result students need to do part time jobs for their extra expenses which hamper their studies. Money is blessings for everyone. So it is also consider as a blessings for students. As a results students need to take care of their money while spending. According to AMNA "**Please do care for your money as it is a blessing which is not blessed to everyone…!**" (Amna, 2016)

Wasting Time

Time is indeed a precious gift for every student's life. They need to utilize it fruitfully to complete their tasks on time. Students need to follow the rules and regulations for submitting the assignments. Some of the universities follows a time lapse in this case. Some of it allow students to submit their assignments before 7 pm and some fail to submit on time as most of them waste their times for printing and binding the assignments from printing stations. As students from every departments come to one place at a time for submitting the assignments, so they need to wait on a long queue which is indeed a time consuming for them. Besides, managing time is really crucial for each and every students. If students waste time it will waste themselves. According to M.Sanjeeta "**If you waste time it wastes you**". (SANJEETA, 2012)

Unable To Submit Assignments

The main aims to help students to understand the importance of submitting assignments on time as well as reinforcing the essential skill of time management, so that students are well aware of the importance of submitting assignments on time despite any circumstances. (Keele University, 2015)

Sometimes students unable to submit their assignments due to some personal issues like sickness, family problems etc. As a result they fail to submit their assignments on time. It is essential for students to come to university to submit their assignments as they need to sign the Feedback Form at admin office. Moreover, students travelling abroad for emergency purposes are not able to submit their assignments.

Assignments Lost

Another issue of using current system is "Assignments Lost". As all the students from different intake gather in one place to submit their assignments, so sometimes admin unable to keep track on the assignments and as a result some of the assignment used to get lost. So they need to redo the assignments which is completely frustrating for them.

Feedback Issue (Students)

Feedback is seen as a communication tool that helps in responding to a student's performance in accordance to an assignment given. (The University of Adelaide, 2014) As the students are not allow to give their feedback so day by day the quality of the education declines. It decrease the reputations of the university. As a result lots of international students become demotivated and used to change the university as well. Besides, the admin panel doesn't know which lecturer is not performing their duties well and the issue of being failed most of the students in exam.

Feedback Issue (Lecturers)

Sometimes it happen most of the students travel abroad on holiday after the assignment submission and lectures need to wait until they come back and get the Feedback Form where he usually give his feedback about the assignments. So it is a lengthy process for getting the feedback from the lecturers. Besides, there is a possibility of getting lost the Feedback Form as well.

From the above discussion we can see that the current system having some major drawbacks which cannot be denied. As we know assignment submission is a major issue for every university students so if the system is having the above cons we need to take of it as early as possible. Although the university is following the current system, not only the students, but also lecturers are also effecting by it.

AIMS & OBJECTIVES

Aims

The aims of this project is to develop an online assignment submission and feedback system for the university students as well as for the lecturers. Below are the sub aims for two specific partitions of the system:

Sub Aims

- ❖ The first sub aim is to develop an online assignment submission system where students will be able to submit their assignments from home and abroad.
- ❖ The second sub aim is to having a partition of feedback for the students where students will be able to provide feedback about teaching quality of the lecturers and duties.
- ❖ And the last sub aim is to allow lecturers to provide feedback to each of the students about their individual and group assignments as well.

Objectives

Below are the objectives illustrated based on sub aims:

- ❖ Based on first sub aim below are the objectives:
- ➢ Analyze the student's perspectives towards replacing the current system with our proposed one.
- ➢ Identify the problems face by the students while submitting their assignments.
- ➢ Point out why most of the students fail to submit their assignments on time.
- ❖ Based on second sub aim below are the objectives:
- ➢ Analyze what are the elements students want on their feedback UI.
- ❖ Based on third sub aim below are the objectives:
- ➢ Identify the problems face by the lecturer while giving feedback to the students.
- ➢ Analyze what are the elements lecturer's wants in the online feedback form.

RESEARCH QUESTION

Here we can divide the research question into two specific fields. They are:

❖ Domain Research Question
❖ Technical Research Question

Below we are going to listing out the domain and technical research questions which will be helpful for the further designing the research and also describing the literature review as well.

❖ **Domain Research Questions**
1. What to expect in UI (User Interface) while logging in to the system from both students and lecturers' panel?
2. What should be the storage requirement for the database?
3. Is this system will be helpful for the students as well as lecturer in future?
4. Is the system should be available 24 * 7?
5. What lecturer expect when they login to the system?

❖ **Technical Research Questions**
1. What programming language (VB, C#) should use while developing the system?
2. Which framework (PHP / .NET) user prefer to develop the system?
3. Which database (SQL SERVER, MYSQL, MONGO DB, and ORACLE) should integrate with the system?
4. What kind of authentication (ASP.NET MEMBERSHIP) should be implemented into the system?
5. Which scripting language (JavaScript, VB Script) should use for developing the system?

RESEARCH DESIGN

Research design is consider as theme which illustrated the research or investigation will take place. It defines how the researchers are going to collect the data, analyze data and what are the instruments need to be employed while researching. (BusinessDictionary, 2016) In this section we are focusing on two research design. They are:

❖ Primary Research
❖ Secondary Research

Here we will divide the questions from domain and technical and indicate which questions are going to consider as primary and secondary research.

Below we are going to describe further how we are going to implement the above two research based on research questions:

Primary Research

This kind of research are based on first hand data. Below are some of the primary researches we are going to take into consideration:

Selected Primary Research Questions

1. Is this system will be helpful for the students as well as lecturer in future?
2. Is the system should be available 24 * 7?
3. What lecturer expect when they login to the system?

Interview

The interview usually conduct with the persons those are directly involved with the system. It is crucial for the researchers to point out the important facts while interviewing so that they can achieve the goal they already set before the interview. For this interview we are going to take question no. 2 from selected questions and our target clients will be university lecturers and students both. We assume there are students other countries too where time is a fact. In that case we will interview some of the international as well as local students from the university to find out how much it will create an impact on assignment submissions as they may submit from different regions as for example staying abroad for any personal issues.

Besides, the lecturers will be involved in interview as giving feedback about the assignments also a part of the system. This interview session will help us to collect important data which will later use for developing the system as well.

Questionnaire

Here we will distribute the set of questionnaires so that it will be easier for us to collect the actual data. For this questionnaire we are going to take question no. 3 from the selected questions and our target clients are university lecturers as the number of the lecturers are large in groups. The questions will be passed to the lecture to know the actual requirements and their expectations towards the system when they log in. The questions will be highlighted the areas of functionalities after they login. Besides, it will also provide the UI (User Interface) related questions like what they prefer from feedback panel after login. For this techniques we will select maximum 3 lecturers from each departments and gather the actual requirements regarding the feedback system.

Based on the questionnaire we will be able to identify the requirements for designing the system and also gather the data to improve the overall functionalities.

Observation

This technique is used to observe the users while interacting to the system or any situations. To conduct this technique we are going to take question no. 1 from the selected questions. Here we will observe how the students and the lecturers are communicating using the current system. It will show whether implementing the new system will be helpful for both lectures and students as well. This will help us to collect data about some cons of the current system as well as how we will be able to improve the proposed one. On the contrary observing the students activities towards assignment submission in a particular time will help us to know usually when the students gather from different departments in one particular area to submit their assignments.

Secondary Research

This kind of research is based on second hand source. Here researchers do research to collect the data depending on different sources like journals, websites, and articles and so on. Below are some of the secondary researches we are going to take into consideration:

Selected Secondary Research Questions

1. Which framework (PHP / .NET) user prefer to develop the system?

2. Which database (SQL SERVER, MYSQL, MONGO DB, and ORACLE) should integrate with the system?

3. What programming language (VB / C#) should use while developing the system?

Online Survey

One of the secondary research we can conduct is engage ourselves on online survey. Here we can take question no 1 from the selected questions. We can do online survey to find out which framework will be useful and friendly on our proposed system development. Although some would like to prefer PHP and others are .NET at the end we will come to the decision based on reviews about the performance and security of each framework. Besides, this online survey will help us to list out some pros and cons of each framework before finally we start developing this online assignment submission and feedback system.

Document Review

Another source of secondary research is document review. Here we can consider question no 2 from the selected questions. We can review some past document created by database administrators to find out which database will be the best for developing this online web application. Usually this kind of document contains some pros and cons of different database integration while developing the system. To be added we can also find from the document which database we can choose in case of real time data manipulation (CRUD).

Online Forum

Forum is another source of data gathering. Here developers from around the world post their individual perspectives regarding the software development issues. Here we can take question no 3 from the selected questions. By reviewing forum we can find out which programming language will be the best for developing our proposed system (UNISYS). Sometimes the forum contains some advantages and disadvantages of backend code (VB / C#). This will help us to choose the best one indeed. Besides, it will help us to take the crucial decision such as choosing backend code which will save out valuable time and energy too.

Above is the description of our research design based on selected primary and secondary research questions. From the above data gathering we can assume that it will not take more than a month to develop our proposed system (UNISYS) as we will have enough first and second hand data sources on hand. To be added this information will help us to develop this system more responsive compare to current one.
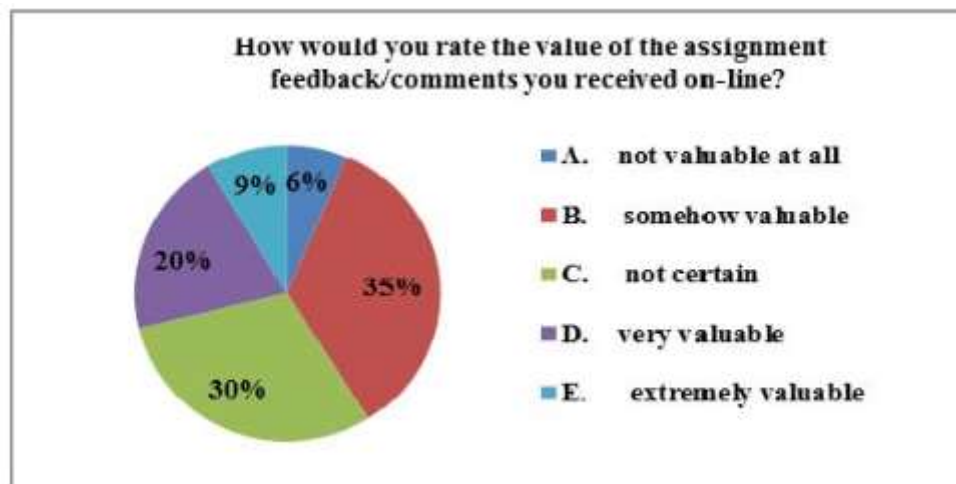
LITERATURE REVIEW

The system we are going to propose is having two sub system. The first sub system is an online assignment submission whereas another one is feedback. This system is having two panels. One from student side and another from lecturer's side. Here we will discuss further about the system in the view of domain and technical. As the system is having two panels so the design of UI (User Interface) will be different. From the student's side the panel will only allow to check the feedback and submit the assignments. Whereas from the lecturer's side the system will allow lecturer to send feedback and receive the assignment from the students. To be added the system will also allow students to send feedback about the quality of the lecturer's those are taking classes which will redirect to administration as well. As the system will be used by all the departments so the storage capacity of the database should be higher than average one. This will make the system more responsive while sending and receiving data from both sides.

From the above discussion we can see there are many sources to gather secondary data for the questions we selected earlier for secondary research. On the secondary we stated that we will do online survey to gather data regarding which framework we will use for developing this system. For our perfectives we think it depends on how responsive the system will become after the implementations. Besides, the capability of supporting numerous programming languages is also one of the fact. According to Andrew Troelsen ".**NET application can be created using any number of programming languages (C#, VB, F# and so on)"** (Troelson, 2012). Here we already selected the basic two programming languages for developing our proposed system. So we will get flexibility while coding the system according to the requirements what we gather from secondary research. On the contrary, from the secondary sources we can see that compare to PHP, ASP.net is much faster based on looing on execution. According to the article "**If the programming language needs to run a 2,000,000 loop execution of a calculation, an ASP.net written in .net language like C# or VB will win over PHP**". (Kohan, 2010)Although we are concern about the framework for developing our proposed system we also need to consider some of the real facts while choosing database integration for the system we well. From the secondary sources there are some studies which clearly compare performance between different databases like MySQL, MSSQL, and ORACLE and so on. On the other hand giving feedback to students is also an important issue. Students prefer feedback from the lecturers so that they can track their

progression. Whether the students are doing well or not, providing feedback usually motivates them to learn more in future. The current system takes much longer to give feedback as lecturers need to fill up the form and write down their comments and pass it to the students. The more the time takes to give feedback the less effective will become. So giving feedback as early as possible is important. Again, hand written feedback sometimes hard to read for the students. The quality of the feedback depends on what are the media lecturer relying on. As for example: when the lecturer give the feedback it must meet the achievement of the students their nature and personality which will surely distinguish them from others as well. (Race, n.d.)

Now-a-days, e-submission has become increasingly important because of the availability of internet connections around the world. So, assessment using online has become easier compare to any previous time. Below are the chart showing how the students reacts towards the online assignment submission system implementing at their university and also the value of assignment feedback comment they usually receive from the lecturers: (Rabab A. Wahab, 2015)

From the above pie chart we can see that the result has been split out into 5 categories. Out if 5 categories the highest one is "Somehow Valuable" which scores 35% of the total. It represents that assignment submission through online including the feedback somehow have a positive impact on the mind of the university students as well. Besides, some of the students also commented regarding the online assignment submission and feedback system are given below:

❖ Enjoying the online assignment submission.
❖ Mostly prefer this system.

❖ This system is simple to be used.

❖ Convenient for the university students.

Read the instructor comments carefully. (Rabab A. Wahab, 2015)

Although our proposed system will have the functionality of the data mining techniques, we will take the comments of the students into special consideration before we implement on real time. On the contrary, feedback system will help to evaluate the teaching quality of the university. Mostly the satisfaction level of individual students can be determine based on their feedbacks. From the feedback university can find out the performance of the lecturers and their experiences regarding teaching. (Rosni Abu Kassim, 2015). To be expected inexperience lecturer score is less than experience lectures regarding the performances. It shows that the overall teaching quality fully depends on the feedback of the students received the university. Sometimes the teaching quality not only depends on lecturer's performance but also depends on student's capabilities, attitudes, enthusiasm as well as dedication. (Rosni Abu Kassim, 2015). As technology is advancing so peoples are going for paperless works. So, students prefer more to online based compare to manual one. Regarding the feedback, it is not that lecturers only have to provide their own criticism or advice, it should also mean to students for acquiring knowledges that can construct them as a future learners. Using paperless allow to track the students whether they send their assignments on no. Along with that cost living is also a concern. Using the manual system force students to spent more whereas if the university implement online it will save money. The above graph also illustrate that 9% of the students are agree with the online assignment submission system. (Rosni Abu Kassim, 2015) .

According to our proposal, the system will have some data mining techniques where it can analyze the keywords of the students from the feedback and distinguish between positive and negative feedback regarding lecturer's performance and teaching quality. On the other way, we used to call it as "**Sentiment Analysis**". This analysis identify whether the feedback of the users is positive, negative or neutral related to any particular topics. (LEXALYTICS, 2016). The implementation of this analysis will do based on 2 approaches which are (a) Machine Learning Based (b) & Lexicon Based. (QUORA, 2013). Although this analysis will help administrator to find out the attitude of the university students, sometimes this will include some limitations too. As for examples: a negative feedback about any lecturer can influence other students mind to have

negative impression. Some of the students might have a bad day with the lecture and gave their negative feedback. So, when the other students will see the feedback they may have a bad impression about the lecturer's performance as well as teaching quality which may affect lecturer's job. (A.R.Guess, 2011`). Another thing need to be consider that keywords users will enter may seems "negative" although the user's emotion varies. As for example: "**Holy Crap!! I love this!!**" The word "**Crap**" used to seems negative impressions whereas the real emotion is "**Excited**". So, the system will only analyze the sentence contains "**Crap**" and shows the negative feedback. (Mullich, 2012) Therefore, implementing sentiment analysis in our proposed system is also a burning issue while developing for the university students as well lecturers.

PERSONAL REFLECTION

From the above discussion we can see that we have to follow some procedures which will guide us to develop our proposed system successfully. This proposed system will save our students time as they won't need to wait on queue on submitting their assignments and also can give feedback which is not available in our current system. At the same time the current system doesn't have the functionality for the lectures to give feedback but our proposed system will have. Although there are some advantages in our proposed system, we are also concern about the limitations.

One of the limitation in our proposed system will be not allowing students to upload their assignments multiple times and submit. Each students will have only one time access for each module will submitting assignments through thus system. As for example: if any of the students submit their assignments before due date they won't be able to submit again the same assignments. So in future we will add some extra features in this system. We will program the system for the students so that they will be able to resubmit their assignments. To be added we will add real time Chabot where students and lectures can contact through real time message. It will be easier for the lectures to give urgent feedback whenever needed.

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