

THE FREE SPACE MANAGEMENT SYSTEM IN BANKING SECTOR

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Abstract

Banking institutions are in charge of running a payment system, lending money, accepting deposits, and assisting with investments. The idea behind our project is how files and directories are stored, how disk space is managed, and how to make everything work efficiently and reliably in banking using free management space. The goal is to explain what the Free Space Management is and how it works using Animation as a medium. The findings of the study help the recipients in understanding the concept of the Free Space Management concept.

1. Introduction

Free Space Management is the system keeps tracks of the free disk blocks for allocating space to files when they are created. Also, to reuse the space released from deleting the files, free space management becomes crucial. The system maintains a free space list which keeps track of the disk blocks that are not allocated to some file or directory (Baweja S., 2014). When created a file, first search for the free space in the memory and then check in the free space list for the required amount of space that required for the file, allocate the space to the new file, then delete the space from free space list (Jain P., 2018). The free space list can be implemented mainly as: Bitmap or Bit vector, Linked List, Grouping and Counting. Bank are one of the real-life examples of this concept.

Banks require a better understanding of how their physical space is being used in order to enhance space utilization. Bank space management software is a remarkable tool that not only identifies vacant spaces but also gives useful data for developing a more efficient space utilization strategy. Banks can use space management software to find innovative methods to reduce or better utilize the space they have at their many branches, stand-alone ATMs, as well as other workplaces in a cost-effective and productive manner.

Banks can use space management software to find innovative methods to reduce or better utilize the space at many branches, stand-alone ATMs, as well as other workplaces in a cost-effective and productive manner. Banks can use space management software to discover unused space and repurpose it more effectively. For example, Bank don't need to lease a new facility for bank's branch; instead, can make better use of the current space. Banks can use space management software to generate ideas into action. It provides with concentrated data in a single location to make things easier. Real-time, up-to-date, and accurate space utilization data is generated. Using data acquired from a variety of sources, banks can possess a deeper insight of how facilities are used and, as a result, make smarter choices to actually reduce occupancy costs.

2. Problem Statement

Several factors and barriers influence the space management software. The challenges during implementation of space management are availability of information, availability of space and ineffective software implemented. Things like the ineffectiveness of this software being implemented greatly affect the system itself, because this is very contrary to the purpose of this software being made, which is the effectiveness of existing space by minimizing additional space. Lack of data makes this software unable to meet its performance, can have impacts such as not being Real-time, not up-to-date, and unable to take advantage of the existing space if the space is not recorded.

3. Project Objectives

The purpose of this project includes:

- I. To explain the concept of the Free Space Management.
- II. To explain the real-life application of Free Space Management.
- III. To explain the concept using animation as a medium.

4. Scope of Project

This project will explain about File-System Implementation: Free Space Management. By using animation, this project is expected to be able to explain well what Free Space Management is, how it works and how it is implemented in real life. This project uses Bank Space Management Software as a real-life application to help viewers understand this concept. The animation explains the definition of Free Space Management, 4 technique of Free Space Management which is bitmap or bit vector, Linked List, Grouping and Counting, real-life implementation of Free Space Management.

5. Significance of Project

The findings of this project will contribute to the body of knowledge about better ways of managing and utilizing space files.

- I. Identify vacant spaces from existing systems and reuse them competently.
- II. Increase the accuracy of the whole data stored in the system that helps the generated data is real-time monitoring.
- III. Reduce cost of occupancy that may include renting more spaces in the system, interest and other expenses.
- IV. Practical in managing all branches of the bank and also the employees with a centralized system.
- V. Increase productivity of the employees that will be helped with a systematic system with less energy uses.

6. Project Methodology

In order to gain a better understanding of the Free Space Management, a good research was conducted. It helps to get a better insight on the importance of utilizing the Free Space Management.

This project consisted of six phases:

- Phase 1: Research planning and tasks division
- Phase 2: Proposal writing
- Phase 3: Animation video editing
- Phase 4: Report writing
- Phase 5: Slides preparation
- Phase 6: Presentation

Animation has been chosen to be the medium to explain this topic. Powtoon software is used to create the animation.

Conclusion

Free Space Management is a concept that teaches to utilize space. One real-life implementation of a system that uses this concept is Space Management Software in the banking sector. Space Management for banking systems is an enhanced tool that helps banks mainly in identifying vacant spaces to provide a better space utilization system. With awareness from the bank management, it is a crisis when the system is running out of free spaces. To prevent and also overcome the problem, a free space management software is introduced to the banking system.

Free Space Management is not difficult to learn especially with real life implementation. Animation is a medium to explain this topic. With all these components, it is hoped that the audience can understand this topic well. There are 6 phases in completing this project, which this phase helps to complete all parts of the project.

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