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Management
DS251
Final Project

Fundamentals Of Management

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Android application

Introduction:

Our project is to make a system to connect between the owner's Co-Working space and the visitor, we will build a complete working app on android operating system, using android studio platform, our app hosting on Firebase Google, and we use Adobe XD for the design.

In short, the app will allow users to find Co-working spaces, book a time, create a profile, see co-working space owners, contact with theme, and more features.

As we see that nowadays there is a lot of co-working spaces, and there is a lot of visitors to this place, so we need to make the process more easily and visitor can search and find the co-working spaces, book a time, and pay, all these features from the app, no need to write anything with the owner, also visitors can book a room for a month. also, Owners can make marketing for their co-working spaces like Facebook, by publish posts, photos, and make offers.

In the following the sections we will starting by talking about the planning process, that is the process of thinking about and organizing the activities required to achieve a desired goal, also we will talk about organizing process that is the function of management which follows planning. It is the process of establishing orderly uses for all resources within the management system of the organization, then we will talk about Influencing process that is The third basic managerial function is leading it is the skills of influencing people for a particular purpose or reason, finally we will end by talking about Controlling that is can be defined as a systematic effort by business management to compare performance to predetermined standards, plans, or objectives in order to determine whether performance is in line with these standards.

Planning:

Now we will talk about the planning process (Function) like an important part of the whole management process, so in planning we will explain what the organization will do to achieve its goal as described in the introduction.

For planning phase, we will talk about what should we do to build our application, what tasks to be performed, when tasks to be performed, and how these tasks will be performed.

1. What tasks to be performed:

In the basic condition for an organization to build a project like our app, the steps will be like, make a complete app requirements, convert these requirements to a class diagram using a tool like StarUML, this tool used to make the class diagram to make this app in a simple style developers can work with it, and for the requirements the client can know what we will do to finish this app, after that the team takes the class diagram and convert it to a design, a UI/UX takes the requirements and the class diagram and build a complete design which will describe the actual app.

The design process will be done on a great platform like Adobe XD, this program is used to build a great design for Mobile apps (Android & IOS), Web Applications, and Desktop applications, this app allows designers to get the essential assets, colors, and text to make the design, it is a simple application with its good, simple and easy user interface, it allows to change the dimensions, orientation, and a lot of design options like opacity for example.

But why designers use this tool instead of Adobe Photoshop, the Great Design, photo editing application, this because of that Adobe XD has another great feature, this feature is Prototype, simply this feature allows designers to display their designs as the actual working design in the app.

After the designers finishing the design of the app on Adobe XD, a backend developers will build the backend system for our app, in our case we will use Firebase Google, this the great service from Google, Firebase have a lot of features and services like: Cloud Fire store, ML Kit, Cloud Functions, Authentication, Hosting, Cloud Storage, and Realtime Database.

Firebase has more than the described features above you will find more information in references, but now for our app we will use 3 main features, Cloud Storage, and we will use this feature to store the users's images, posts's images, and any image, voice, and video, We also will use Authentication, this feature will used to register the users and make the sign up and login process very easy for users, finally we will use Realtime Database feature, as a database for our app, its simple, easy to query, and Realtime also.

For that, backend developers will connect the app project to a firebase project and create a database, storage, and authentication for the app, and then finally, app developers will start their work by make the Adobe XD now an actual design in Android Studio and implement the firebase library and other important libraries, so app can work, and then they will start to build a page by page in our app.

2. When tasks to be performed:

As described above, a time plan will be placed to make a future predicting for when our app will almost finish, so the plan will be as come.

This app will take almost 2 months to finish, so first the developers will write the requirements and make the class diagram in the first week, after that the designers will make the design on Adobe XD in the next 2 weeks.

After the designers finishing their work, the backend developers will design the database and the another firebase features in one week, now after 1 month our developers are ready to start the actual work on Android Studio, their work will take one month, to make the actual design and the build the real functionality app.

3. How tasks to be performed:

To explain how team tasks will be done, we need to know first, what the actual app pages (Activates) should create, our app contains the following page: Splash, Sign up, Login, Home, Profile, Timeline, Users, Time, Settings, Help, and About app page.

So, first, developers will design and code the sign up and login pages and then connect them to firebase authentication, then they will create the home page with its design and retrieve the user data from firebase Realtime database, after that they will create the other page, timeline page that will display the posts of co-working spaces owners, then the profile page, and the users page that will display all users registered in the system, then the timer page that will used to set a timer when user book a time in a co-working space, and also settings page, help, and About page, and Log out button.

The described above in a simple way what should developers to, in the references there is the link of the app GitHub to see the whole project code and xml design code.

Now after showing the above systematic development of action programs aimed at reaching agreed-upon business objectives by the process of analyzing, evaluating, and selecting among the opportunities for our app which focusing on attaining goals.

This planning will help the team leaders and the organization mangers to be future-oriented, and enhances the decision coordination, emphasizes the organizational objectives the described in the introduction, and it will be the basic basis for organizing, influencing and controlling.

To make the above planning steps we had follow these the following steps:

- Stating the organizational objectives.
- Listing the alternative ways of reaching the goals.
- Developing premises upon which each alternative is based for.
- Choosing the best alternative for reaching the goals.
- Developing plans to pursue chosen alternative.
- Putting the plans into action.

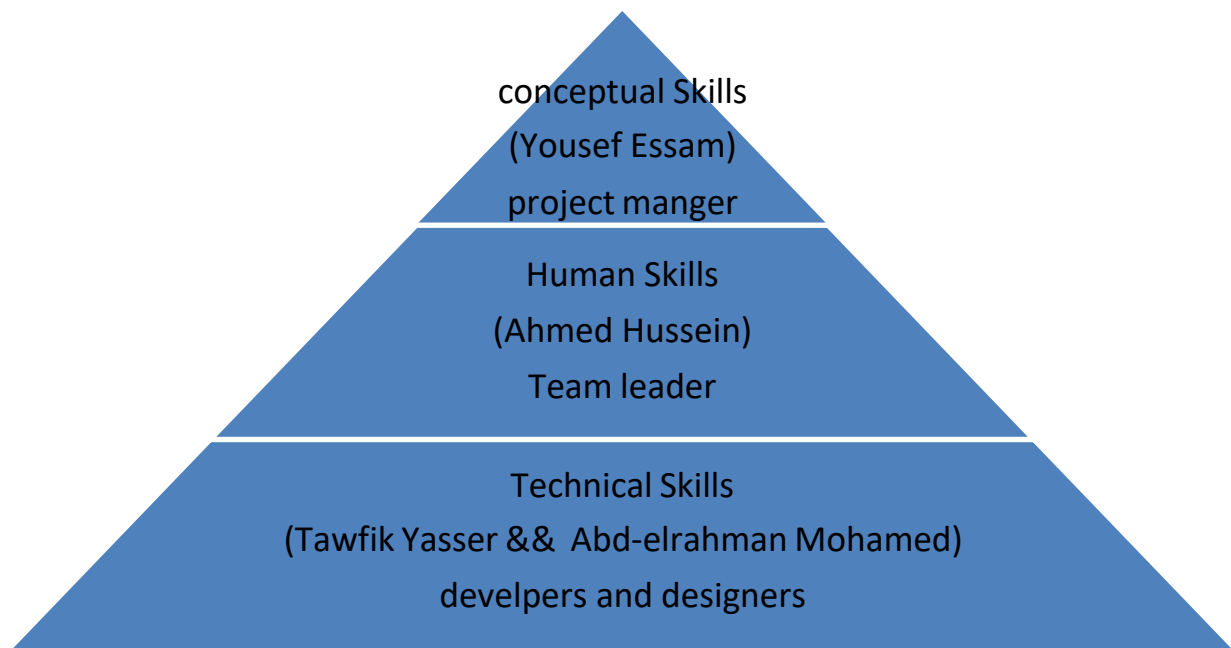
Now we need to talk in short on our organizational objectives, that is what the organization exists to do, given a group of customers and customer needs. As known that our team consists of Team Leader, Android Developers, Backend Developers, and Designers.

So, our organizational objectives for businesses can be summarized in three points:

- Profit is one of our goals.
- Service to customers by the provision of desired economic values to serve the visitors of co-working spaces.
- Our managers have social responsibilities in accordance with the ethical and moral codes of the society in which the business operates.

Finally, we worked with MBO (*management-by-objectives*) as an appreciation for our main potential, also understating the goal SMART Type to achieve our goals in a smart way, so our individuals are assigned a specialized set of objectives, performance reviews are conducted periodically, rewards are given to individuals.

Organizing:



In order to make a successful application we need a high level of easy in the application design .So Abdel-Rahman should use (a good user interface) such as using a suitable colors , backgrounds , and buttons in the design .An important thing too is to use placeholders (in order to make the user know what should he do in every field).

Also if the design contains a tutorial (for users that they don't know any action for using applications, this tutorial contains more details about using the application).Creating list that show areas and the nearest ones that are available for booking (if user want to see) makes style easy too.

For example, if we compare between these two pictures, what you will prefer to use?



Moving to development process that is for Tawfik , we need an application that has the following characteristics :

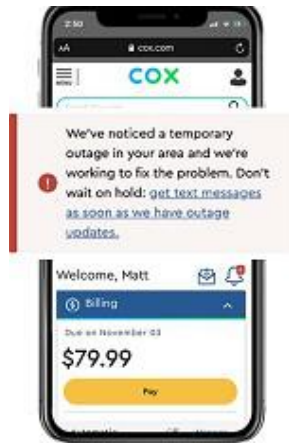
Speed.

No →



Lower space in memory storage.

Has no fail to connect to the internet.



No →

Using cookies.

May use cash memory.

Has an exception handling.

Has a strong database and backup of it.

Has no bugs.

Some hints for the development process:

I can advise the developer by these hints:

When you choose a programming language, I ask you to keep in your mind that:

C++:

C++ is not easy to use in the development process. It is an older object-oriented language with many rules and limitations.

It is standardized by the International Organization for Standardization, which both helps the language and slows down its development.

There is a wide range of support when you run into issues, but newer functionalities take time to be added due to the review process.

If you're a brave soul, jump right in! C++ offers the highest level of control with access to C++ libraries and native development. This means your code will communicate directly with the device.

For one thing, there is no automatic garbage collection. This means objects aren't removed from the device's memory. Unless you code this manually, the memory will continue to fill and eventually the app will crash.

C++ is also very unforgiving when you make errors in the code. No error messages or exceptions will be given, your code will crash with no explanation.

Java:

Java is a slightly more friendly language for developing an android application, it is a very universal object-oriented language and runs on the Java Virtual Machine.

But the Java Virtual Machine converts your code into another language first, and then can convert it to work on any operating system, including Android and iOS.

This would be like having an interpreter convert your English to French, then having multiple interpreters convert the French into Spanish, German, or any other language.

However, coding in Java means you are communicating with the Java Virtual Machine and not natively.

Unlike C++, Java gives error messages and helps you define what is wrong with your code.

On the downside, Java has many rules and requires a deep understanding of inheritance and hierarchies.

If C++ and Java seem too complicated, however, there is a third language that might be best for you.

Kotlin:

Kotlin is a newer language developed by Google. Since it was developed by Google, it works seamlessly with Android and Java.

This new language is inspired by Java, C++, and all of their precedents, so you can think of it as an improved version of these languages with newer features added.

You can generally achieve the same result with fewer lines of code. Unfortunately, since this language is new and not standardized, there is less support and troubleshooting available, which might make it difficult for beginners.

Overall, however, it's a great starting point if you're venturing into the vast world of Android development.

Influencing:

Influencing: is one of the most important management Basics Functions So We Will talk about our project Influencing in a Few pages.

And we will talk about:

- 1) Definition of Influencing:
- 2) Being Manager but not a leader
 - 2.1) Manager Properties
 - 2.2) Leader Properties
- 3) The Secret of Motivation in the real Work
- 4) Influencing Skills
 - 4.1) Communication Skills
 - 4.2) leadership Skills
 - 4.3) Team Skills
 - 4.4) Creativity Skills

Definition:

Influencing: it is the skills of Leading people for a particular purpose or reason and Motivation Them.

Leading is influencing or prompting the member of the organization to work together with the interest of the organization.

Creating a positive attitude towards the work and goals among the members of the organization is called leading.

Motivating is an essential quality for leading. Motivating is the function of the management process of influencing people's behavior based on the knowledge of what cause and channel sustain human behavior in a committed direction.

Being Manager but not a Leader:

A manager is a person with a job of overseeing one or more employees or department to ensure these employees or departments do their job or assigned duties as required.

A manager helps others to get more done by motivating the employees, providing directions, making sure the employees working together towards a common goal, and providing feedback.

A manager may be responsible for a small team or a small project. Usually a senior manager will watch over his or her work. The manager will have to learn the strengths and weaknesses of the team members, instruct a work to the team members, guiding team members to reach goals, provide the tools needed by the team and motivate them to do their task.

A leader is different from manager. A leader is a person who has vision, a drive and a commitment to achieve that vision, and the skills to make it happen. A leader look into a problem that needs to be fixed or a goal that needs to be achieved.

A leader is also a person who guides others towards a common goal, showing the employees by example and creating an environment in which other team members feel active and involved in any process or task. A leader is a good listener. Leaders must keep their mind open to other's ideas. They can come up with new ways to accomplish the goal set. It is the leader's job to make sure that everyone in the group is being heard. Leaders must listen to the team members ideas and listen their criticism for improvements.

so, we always seek to be Manager but leader Because we in the same ship, and the individuals Success return and put in the public interest.

The Secret of Motivation in the real Work:

In this Point a lot of Books Written in this point regrade its important in achieve Hight Quality and Increase Amounts of Products, Because of you have a magic feeling when author Motivate you and felled you that the thing that you do is the greatest things. And it is the most Manager Property that ang Manager Must have it.

And the very popular Books in this Field are:

- 1) Motivational design
- 2) Motivation a key to success
- 3) The secret of motivation

Due to the Importance and the effect of motivation in Quality
We believe in the motivation and its effects and motivation our Employees if
their if Small or big job regardless the position of this Employee.

Influencing Skills:

1. Communication Skills

Your ability to influence effectively is an everyday skill that you don't want to be without. It is not about manipulating others; it's about understanding how other people think and see things. If you can understand what is going on in the mind of another person and understand their pattern of thinking it will enable you to see things from their point of view more effectively. The important rule is to remember that trying to influence, persuade or negotiate in the way that you can be influenced does not guarantee success. You will be using 'your strategy' rather than 'their strategy. Flexibility in your communication style is key.

Communication and Influencing and related each other
Because we can't lead any person or Employee without having good communication skills that enable us to that
So, in Our Company it is one of the most required qualifications that the person has the Communication skills.

Leadership skills

Leader is one of the most important persons in our Company

If he has the skills than enable it to become leader

As was said without leader in the Company it is equal without Default-getaway in the Computers device.

2. Leadership skills:

Are skills you use when organizing other people to reach a shared goal. Whether you're in a management position or leading a project, leadership skills require you to motivate others to complete a series of tasks, often according to a schedule. Leadership is not just one skill but rather a combination of several different skills working together.

Such that:

- Patience
- Empathy
- Active listening
- Reliability
- Dependability
- Creativity
- Positivity
- Effective feedback
- Timely communication
- Team building
- Flexibility
- Risk-taking
- Ability to teach and mentor

3) Teamwork Skills:

Teamwork skills are essential to your success at work, no matter your industry or job title. Working well with clients, colleagues, managers and other people in your workplace can help you complete tasks efficiently while creating an enjoyable environment both for yourself and others. An organization that emphasizes good teamwork skills is typically a healthy, high-functioning workplace. And some people look at team skills as the routing protocols between two devices (routers). It is exactly that team skills are the protocols between people in the work environment.

Controlling:

What is controlling:

Controlling is the process managers go through to control. And is also known as:

A systematic effort by business management to compare performance to predetermined standards, plans, or objectives to determine whether performance is in line with these standards and presumably to take any remedial action required to see that human and other corporate resources are being used in the most effective and efficient way possible in achieving corporate objectives.

The main purpose of controlling is to be responsible for all accounting activities within our organization.

The controlling Process:

- How we measure it:

First the manager divides our work into tasks and each task has its own target and then he compared our work performance with the target.

Second the manager determines the level of each task accomplished by each target employee. Our co-working space program is tending to help people to book places that help people to do their activities.

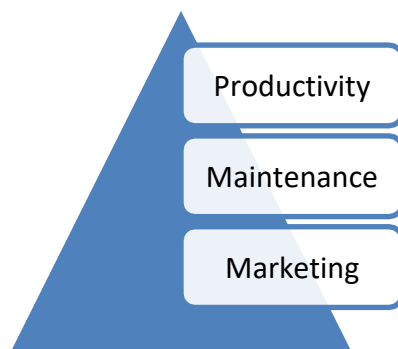


Comparing Measured Performance to Standards:

The manager put some standards that we should follow it:

In any successful project there are 3 stages that the successful organization must follow:

1. **Productivity:** in this stage we transform our idea into real project, test the app as one part, and ensure that our message of our application is good and useful for people.
2. **Maintenance:** in this stage we fix all the bugs that we found out in our system.
3. **Marketing:** this is the last stage after all work done we tried to market our application by butting It on app store, put advertisement, publish it and our idea on Facebook, Instagram, Twitter, LinkedIn.



The standards in our application:

1. Number of people who download the app.
2. The rate of our app.
3. Profit.

Number of people who download the app:

We expected that the number of people who download co-working space app will be 8000 people but unfortunately the number of people become 5000 persons.

The rate of our app

We expected that the rate of our app will be 3.2 and we found out that the rate become 3.5.

Profit

We put our primary profit will start from 20000 E .P and it becomes 17000 E.P.

After all these statistics we put in us consider alternative planes to improve our performance

So first we make performance report and look at the reviews of the people who download it and we recognized that there were problems in User Interface (UI), so we consider some modification to become easier for people.

Second, we spend more budgets on marketing and more advertisement.

Taking Corrective Action:

First, we want to increase the number of people who will download our co-working space app so we will care about marketing so we will publish our idea and give many advertisements on Facebook, twitter, Instagram, LinkedIn. We also make it easier to search it and how to use it.

Second, we make our app easier in his interface by improving the user interface of co-working space.

Third, we upload video on YouTube about our application and how to use it.

Fourth, we design logo for our app.

Fifth, we make a website that explains the idea of our application in detail that we called it our portfolio.

Alternative plans effect:

Number of downloads: the number of downloads has increased by 3000 persons, so it achieved the target and the number of people who download it becomes 8000 persons.

Rating: the rating is increased and become 3.7.

Profit: the profit increased and become 25000 E.P.

So Briefly I will talk about the reasons that make our organization and little startup project become successful.

Making Controlling Successful:

1. Focus on our system and his activities and purposes.
2. There were different kinds of goals and roles in our application.
3. Timely corrective actions
4. Communication of the Mechanics of the Control Process.

Now after all these functions, now our app in running and we are finish.

References:

- Our main reference is the Book (Introduction to Modern Management)
- Lecture PDFs
- For Android Resources we used:
 - <https://www.tutorialspoint.com/android/index.htm>
 - <https://developer.android.com/guide>
 - <https://firebase.google.com/>
 - <https://www.adobe.com/menar/creativecloud.html>