

A  
Micro project  
On  
**“How does mobile hotspot work and report on WiFi and hotspot”**

Submitted By  
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Guided By  
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Diploma Course in Computer Technology  
(As per directives of I Scheme, MSBTE)



Sinhgad Institutes  
Sinhgad Technical Education Society's  
SOU.VENUTAI CHAVAN POLYTECHNIC  
PUNE - 411041  
ACADEMIC YEAR 2022-2023



# Maharashtra State Board of Technical Education

## Certificate

This is to certify that **Mr. Narayan Malvankar** with Roll No. **31** of Semester **IV** of Diploma in Computer Technology of Institute Sou. Venutai Chavan Polytechnic (Code: 0040) has successfully completed the Micro-Project in **Data Communication and Computer Network (22414)** for the academic year 2022-2023 as prescribed in the curriculum.

Program Code: CM

Course Code: CM/4/I

Place: Pune

Enrolment No: 2100400101

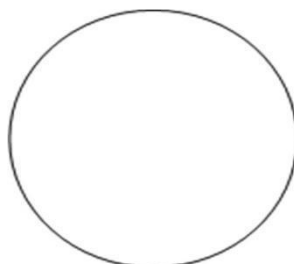
Date: \_\_\_\_\_

Exam Seat No: 169297

**Mrs. S.S.Kadam**  
Course teacher

**Mrs.A.V.Kurkute**  
HOD of Department

**Dr.(Mrs.)M.S.Jadhav**  
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This is to certify that **Mr. Tejas Argade** with Roll No. **46** of Semester **IV** of Diploma in Computer Technology of Institute Sou. Venutai Chavan Polytechnic (Code: 0040) has successfully completed the Micro-Project in **Data Communication and Computer Network (22414)** for the academic year 2022-2023 as prescribed in the curriculum.

Program Code: CM

Course Code: CM/4/I

Place: Pune

Enrolment No: 2100400142

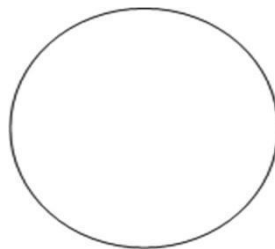
Date: \_\_\_\_\_

Exam Seat No: 169334

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This is to certify that **Mr. Harshwardhan Kharat** Roll No. **35** of Semester **IV** of Diploma in Computer Technology of Institute Sou. Venutai Chavan Polytechnic (Code: 0040) has successfully completed the Micro-Project in **Data Communication and Computer Network (22414)** for the academic year 2022-2023 as prescribed in the curriculum.

Program Code: CM

Course Code: CM/4/I

Place: Pune

Enrolment No: 2100400109

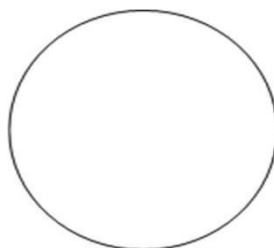
Date: \_\_\_\_\_

Exam Seat No: 169305

**Mrs. S.S.Kadam**  
Course Teacher

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## Annexure - I

### Micro-Project Proposal

### **“How does mobile hotspot work and report on WiFi and hotspot”**

#### 1.0 Aim of the Micro-Project:

- A. To provide a better understanding of this technology and its functionality. By examining the technical aspects of mobile hotspots, users can learn how to enable and use the feature on their devices effectively.
- B. Additionally, understanding how devices report on Wi-Fi and hotspot usage can help users monitor their data usage and avoid exceeding their data limits

#### 2.0 Intended Course Outcomes:

- a) Technical proficiency: Completing a micro-project on mobile hotspot technology requires an understanding of how to enable and use the feature on various devices and operating systems. This can contribute to the development of technical proficiency in using digital devices and tools.
- b) Digital literacy: Understanding how devices report on Wi-Fi and hotspot usage can help users monitor their data usage and avoid exceeding their data limits, contributing to the development of digital literacy and responsible use of technology.
- c) Communication: The ability to explain complex technical concepts in a clear and concise manner is an important aspect of communication. Completing a micro-project on mobile hotspot technology requires the ability to explain how the technology works and its benefits in a way that is easy to understand, contributing to the development of communication skills.
- d) Problem-solving: Troubleshooting connectivity issues and optimizing hotspot performance requires problem-solving skills. Completing a micro-project on mobile hotspot technology can contribute to the development of problem-solving skills and the ability to identify and resolve technical issues.

#### 3.0 Proposed methodology:

- a) Analyze the functioning of WiFi and Mobile Hotspot.
- b) Done research and studied the various elements to be used in the project

- c) Studied and understand the methods/steps used and implemented them in the project.
- d) Prepared a Project plan.
- e) Solve errors checked the answers and conclusion.
- f) Prepared the final project report.

#### 4.0 Action Plan:

Sr. No.	Details of Activity	Planned Start Date	Planned Finish Date	Name of responsible Team members
1	Identify the requirements of the project.	20/02/2023	24/02/2023	Tejas Argade
2	Design the structure of the project.	24/02/2023	28/02/2023	Tejas Argade
3	Develop the program using in JAVA.	28/02/2023	06/03/2023	Narayan Malvankar
4	Debug code and eliminate errors occurred.	06/03/2023	13/03/2023	Narayan Malvankar
5	Test the project.	13/03/2023	20/03/2023	Harshwardhan Kharat
6	Prepare the final report.	20/03/2023	04/04/2023	Harshwardhan Kharat

#### 5.0 Resources Required:

S. No.	Resources required	Specifications
1	Computer system	Intel i7 -12800P CPU, RAM 16 GB
2	Operating System	Windows 11, 64 Bit Operating System
3	Browser	Google Chrome

## 6.0 Team members:

S. No.	Roll. Number	Name of Student
1	31	Narayan Malvankar
2	46	Tejas Argade
3	35	Harshwardhan Kharat



## Annexure - II

### Micro-Project Report

#### 1.0 Rationale:

- a) To acquire the knowledge how does mobile hotspot work and report on WiFi and hotspot

#### 2.0 Aim of the Micro-Project:

The aim of the proposed methodology is to facilitate the development of technical proficiency and digital literacy in using mobile hotspot technology, as well as to promote problem-solving skills, resourcefulness, and communication skills. Through the process of conducting the micro-project, users can gain a deeper understanding of how mobile hotspots work and how to use them effectively, contributing to their overall ability to use digital devices and tools in a responsible and effective manner.

#### 3.0 Course Outcomes Achieved:

- Technical proficiency in using digital devices and tools
- Understanding of mobile hotspot technology and how it works
- Ability to enable and use mobile hotspot feature on various devices and operating systems
- Familiarity with the built-in data tracking features of devices or third-party apps to monitor Wi-Fi and hotspot usage
- Ability to analyze data collected on Wi-Fi and hotspot usage to identify patterns and trends

## 4.0 Literature Review:

Certainly, here is a more detailed explanation of how mobile hotspots work and how they report on Wi-Fi and hotspot usage:

Mobile hotspots are a convenient way to share your smartphone or mobile device's internet connection with other devices, such as laptops, tablets, and gaming consoles. This feature is particularly useful when you're on the go or in an area with no Wi-Fi available. Mobile hotspots use your device's cellular data connection to create a Wi-Fi network that other devices can connect to, allowing them to access the internet.

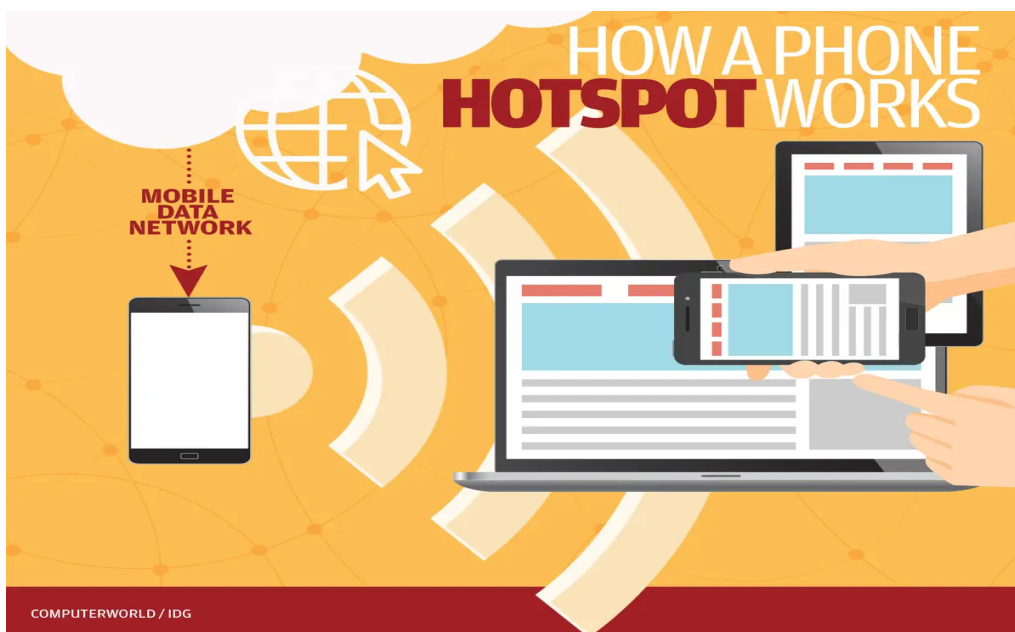
To use a mobile hotspot, you first need to enable the feature on your device. The exact steps may vary depending on your device and operating system, but in general, you can find the hotspot feature in the settings menu. Once you've enabled the hotspot, you'll need to set a name and password for the Wi-Fi network. This ensures that only devices with the correct password can connect to your hotspot.



When another device connects to your hotspot, it uses your device's cellular data connection to access the internet. This means that the amount of data used by the connected devices is deducted from your mobile data allowance. If you go over your data limit, you may be charged extra fees or experience slower data speeds.

One important thing to keep in mind when using a mobile hotspot is that it can use a significant amount of battery life on your device. This is because the device is constantly transmitting data over Wi-Fi and using cellular data to provide internet access to other devices. To conserve battery life, it's a good idea to turn off the hotspot when you're not using it.

Now, let's talk about how devices report on Wi-Fi and hotspot usage. When you connect to a Wi-Fi network, your device will usually display information about the network, such as its name (SSID), signal strength, and whether it's secured with a password. Some devices may also display information about the type of network (e.g. 2.4GHz or 5GHz).



When it comes to reporting on hotspot usage, there are a few ways to track how much data is being used by connected devices. On most devices, you can check the data usage for your hotspot in the settings menu. This will show you how much data has been used by your hotspot in the current billing period, as well as a breakdown of how much data each connected device has used.

If you're using a mobile hotspot on a limited data plan, it's important to keep track of how much data is being used by each device. Some devices may have settings that allow you to set data usage limits or notifications for individual devices. This can help you avoid going over your data limit and incurring extra charges.

In addition to tracking data usage, some devices may also allow you to monitor the status of your hotspot, such as how many devices are currently connected and the signal strength of the Wi-Fi network. This information can be useful for troubleshooting connectivity issues or optimizing your hotspot performance.

Overall, mobile hotspots are a convenient way to share your mobile data connection with other devices. By enabling the hotspot feature on your device and setting a secure Wi-Fi network, you can provide internet access to other devices while on the go or in areas without Wi-Fi. Just remember to keep an eye on your data usage and conserve battery life on your device by turning off the hotspot when it's not needed.

## 5.0 Actual Methodology Followed:

1. Studied and understand the topic/Aim of the project.
2. Done research and studied the various elements to be used in the project.
3. Studied and understand the methods/steps used and implemented them in the project.
4. Prepared a Project plan.
5. Solve errors checked the answers and conclusion.
6. Prepared the final project report

## 6.0 Actual Resources Used:

S. No.	Resources required	Specifications
1	Computer system	Intel(R) Pentium CPU, RAM 8 GB
2	Operating System	Windows 11, 64 Bit Operating System
3	Softwares	Java JDK 15.02, Notepad++, Command Prompt, Visual Studio Code

## 7.0 Output:

- The outputs of a micro-project on how mobile hotspots work and report on Wi-Fi and hotspot may include:
- A report detailing the technical aspects of mobile hotspot technology and how it works.
- A set of recommendations for optimizing hotspot performance and managing data usage based on data collected during the project.
- A summary of the benefits and limitations of using mobile hotspots, including comparisons with other technologies.
- A presentation of findings to a group of peers or colleagues.
- A demonstration of the use of mobile hotspots to enable connectivity and data sharing in different settings.

## 8.0 Skills Developed:

- a) Studied how does mobile hotspot work and prepared a report on WiFi and hotspot.
- b) Function effectively as a leader and team member in diverse/multidisciplinary teams.
- c) Creating and designing the detailed report about the project.

## 9.0 Conclusion:

Thus, we learnt how does mobile hotspot work and report on WiFi and hotspot.