Progressive Education Society's
Modern College of Engineering
MCA DEPARTMENT

PBL (MCA-I) Abstract (2022-23) TERM II

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Project Title	Automatic fire extinguisher van
Technology used	Ardunio [IOT}
Group No.	10
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Keywords	Automatic, fire extinguisher, van, driverless, GPS, fire sensor, extinguishing agent, fire detection, man power, emergency response.
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<< Automatic fire extinguisher van >>

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Technology Used: Arduino [IOT]

Modules :

1)Navigation module:

This module would use GPS coordinates to navigate the van to the location of the fire. It would need to be highly accurate and reliable to ensure that the van reaches the fire quickly and efficiently.

2.)Fire detection module:

This module would be responsible for detecting fires using sensors such as thermal cameras or smoke detectors. It would need to be highly sensitive and accurate to ensure that fires are detected as early as possible.

3.)Extinguishing module:

This module would be responsible for extinguishing fires using appropriate extinguishing agents such as water, foam, or dry powder. It would need to be designed to deliver the extinguishing agent efficiently and effectively to ensure that fires are extinguished as quickly as possible.

4)Communication module:

This module would be responsible for communication between the van and the main station. It would need to be designed to ensure that the backup team from the main station is alerted as soon as a fire is detected, and that communication is maintained throughout the response.

Introduction :

The idea of an automatic fire extinguisher van that can navigate using GPS coordinates and detect and extinguish fires using sensors has the potential to revolutionize the way we approach fire safety in urban areas. By deploying a fleet of these vans in each sector of an urban area, fires can be responded to quickly and effectively, potentially minimizing damage and saving lives. The use of GPS navigation ensures that the vans can reach the location of the fire quickly, and the sensors used to detect fires would need to be highly sensitive and reliable to ensure accurate detection. These vans could be equipped with appropriate storage and delivery systems for extinguishing agents such as water, foam, or dry powder, depending on the type of fire.

In addition, having a backup team from the main station with manpower would be useful in situations where the fire is too large or too complex for the automatic fire extinguisher van to handle on its own. The backup team can provide additional resources and expertise to deal with the fire and can also help to coordinate with other emergency services if required. This combination of automatic fire extinguisher vans and backup teams from the main station can

provide a comprehensive and effective response to fires in urban areas, leveraging the latest technology alongside human expertise and resources to ensure that fires are detected and dealt with quickly and safely. The deployment of such a system would require careful planning and investment, but the potential benefits to society would be significant, such as reducing the risks to human firefighters and improving fire safety in urban areas.