THADOMAL SHAHANI TSEC ENGINEERING COLLEGE

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Experiment No-05

Aim -: To implement containerization using Docker.

Theory:-

Docker is the containerization platform which is used to package your application and all its dependencies together in the form of containers so to make sure that your application works seamlessly in any environment which can be development or test or production. Docker is a tool designed to make it easier to create, deploy, run applications by using containers.

A container is a standard unit of software that packages up code and all its dependencies so the application runs quickly and reliably from one computing environment to another. A Docker container image is a light weight, stand alone, executable package of software that includes everything needed to run an application: code, runtime, system tools, system libraries and settings. Container images become containers at runtime and in the case of Docker containers - images become containers when they run on Docker Engine. Available for both Linux and Windows based applications, containerized software will always run the same, regardless of the infrastructure. Containers isolate software from its environment and ensure that it works uniformly despite differences for instance between

between development and staging.

Docker containers that run on Docker Engine:-

- Standard:- Docker created the industry standard for containers, so they could be portable anywhere.
- Lightweight:- Containers share the machine's OS system kernel and therefore do not require an OS per application, driving higher server efficiencies and reducing server and licensing costs.
- Secure:- Applications are safer in containers and Docker provides the strongest default isolation capabilities in the industry.

Docker Engine is the industry's de facto container runtime that runs on various kernels and windows for

Conclusion:- Thus we have successfully studied and implemented containerization using Docker.