ST. XAVIER'S COLLEGE,MAPUSA GOA
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Nature of Event (Workshop, Guest Lecture, Add-on Course, Seminar, etc.)	Hands-on (Workshop)
Name of Department	Computer Science
Faculty In-Charge	Ms. Sandra Fernandes, Mr. Edwin D'Souza
Stratum of Event (College, State, Regional, National)	College
Title of Event	Docker
Date of Event	19th March, 2022
Venue	Computer Science Lab, St. Xavier's College, Mapusa
Resource Person details	Ms. Andrea Fernandes, Software Developer, VMWare, Bengaluru.
Objective/Scope of Event	To gain basic understanding of using docker.
Particulars of Event	The 1st day of the Computer Science Alumni Hands-on Series of the Department of Computer Science was on the topic "Introduction to Docker" on 19th March, 2022. The resource person was Ms. Andrea Fernandes, Software Developer, VMWare, Bengluru. The hands-on session was conducted in the Computer Science Laboratory. The session commenced at 11.00 am with an introduction of the resource person Ms. Andrea Fernandes by Mr. Zack Pinto, Third Year B.Sc. Computer Science student of the college. After the introduction Mr. Andrea Fernandes briefly explained the agenda of her workshop. The agenda for the session was, • What is docker? • Why do we need docker? • Virtual machines and containers

- Docker Architecture
- Docker Installation
- Docker Commands
- Dev Workflow

She explained that docker is platform for building, shipping, and running applications in a consistent manner. She Elaborated on problems when applications may work on a local machine or laptop but won't work once deployed to Production or another machine. She illustrated with examples how Docker can easily package our app with everything it needs, if it works on a dev machine, it is guaranteed to work in any other env or machine (test/prod etc.). She explained how a new person joining the team does not have to waste time setting up and configuring all dependencies, just telling docker to bring up the env, docker will set up all dependencies and environment. Also how multiple apps with different dependencies and config can run on same machine within different Docker containers.

She demonstrated how docker manages configuration of dependencies and the environment, and explained the hypervisors virtualbox viz. vmware, hyper-v. She also covered the docker architecture.

Next was the hands-on session on docker for which the students were eagerly waiting. Ms.Andrea Fernandes provided the link viz.https://docs.docker.com/get-docker/ to the   students to do the necessary installation of Docker Desktop - Docker Engine + Other tools and to download docker desktop from Docker Hub.

The students did hands-on with   docker commands FROM, RUN, CMD, ENTRYPOINT, ADD, COPY, ENV, WORKDIR, EXPOSE under the guidance of the resource person. Next the resource person explained the Docker Workflow, how the Docker file is used to build a docker image, the image contains all the project code & env needed to run the code, run the image to create as many docker containers you want, the image can be

	uploaded to docker hub or any private registry, one can pull this image from the registry and build a container. The docker registry was explained, the Storage component for docker images, the Repository of images. How we can store images either in private or public repositories, the Docker Hub is dockers own cloud repository. Why use registries? , Control where your images are being stored, Integrate image storage with your in-house dev flows Next followed hands-on session under the guidance of the resource person where students worked on docker commands viz. docker –version, docker pull, docker run, docker ps -a, docker exec, docker stop, docker kill, docker commit, docker login, docker build, docker push, docker rm, docker rmi. Exercises were given to the students from the web resources https://github.com/andyfeds/docker-excercise.git , https://hub.docker.com/ The students worked on the exercises with the help of the resource person. The day ended with a question and answer session, where the resource person Ms. Andrea Fernandes clarified on various aspects of docker and also queries on various topics of the IT industry like job avenues and how one needs to prepare for a IT career. The vote of thanks was given by Mr. Stanford Dias, Third Year B.Sc student of the college. The session was coordinated by Ms. Sandra Fernandes, Vice Principal of the college.
Outcome of Event	Students have acquired basic understanding of docker.
Feedback	Good.

Total No. of Participants	20

Photographs :