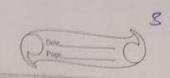
Shreyash Dhasade 05 Page 1 PWA Assignment 02 0.1) Define Progressive Web App (PINP) and explain its significance in modern web app development Discuss key characteristics that differentiate PWA's from traditional mobile apps in short A progressive web app (PWA) is a type of web application that leverages modern web technologies to provide wers with an experience similar to that of native mobile apps. PWAS are designed to work sedinlessly across different devices and platforms, offering features such as functionality push notification and access to device hosdobord like. comeras and geolocation. characteristics: 17 17 cross platform compectibility: PWAS are built using well application technolo gies CHTML, Ces, jarroscript) and are accessible through web browsers, tocking them compatible various platforms like desktops, smart phones without the need for separate versions for platforms. 2) Responsive design: PWA's are responsive and can adpat to different screen sizes and orientations and providing a consistent user experience across devices.

3) offline functionality! PWAS are responsive and adapt different screen sizes and orientations, providing a consistent experience. They can wakk offline connectivity by utilizing Gervices weekers catching and local storage to access content even when mey are offline. 47 Fast loading! PWAS are designed to load quickly even on slow networks through techniques 57 Appilike experience They provide applike experience with feature such as homescreen Installations push notifications, smooth navigations and transition 6) Improved discoverability: They can be discovered through web search, showed URL and indexed by search engines. 92) perine responsive web design and explain its importance in the context of progressive web app, and contrast responsive Huid + adaptive web design approaches. Responsive web app design is an approach to web development that aims to create web pages that respond or adapt's to users! device and screen size, providing an optimal viewing experience across a wide rang of devices. Teacher's Sign.:



In context of progressive web apps (PWA) responsive web design is crucial because PWAS designed to be accessible across vourious dévices and screen sizes.

- 1) Responsive web design!
- · Responsive web désign uses a combin--ation of flexible grids, layout to dynamitally adjust the size based on the sizeen sizes and orientation.
 - · It provides a consistent wer experience across different devices by ensuring screen
 - · Responsive design is considered the most flexible and future proof approach
 - 27 fluid Web design.
 - This is also known as liquid layout, involves designing web pages.

 Elements on the page resize propor
 - Honally to the size of the browsez window.

 . While fluid design helps thaintain

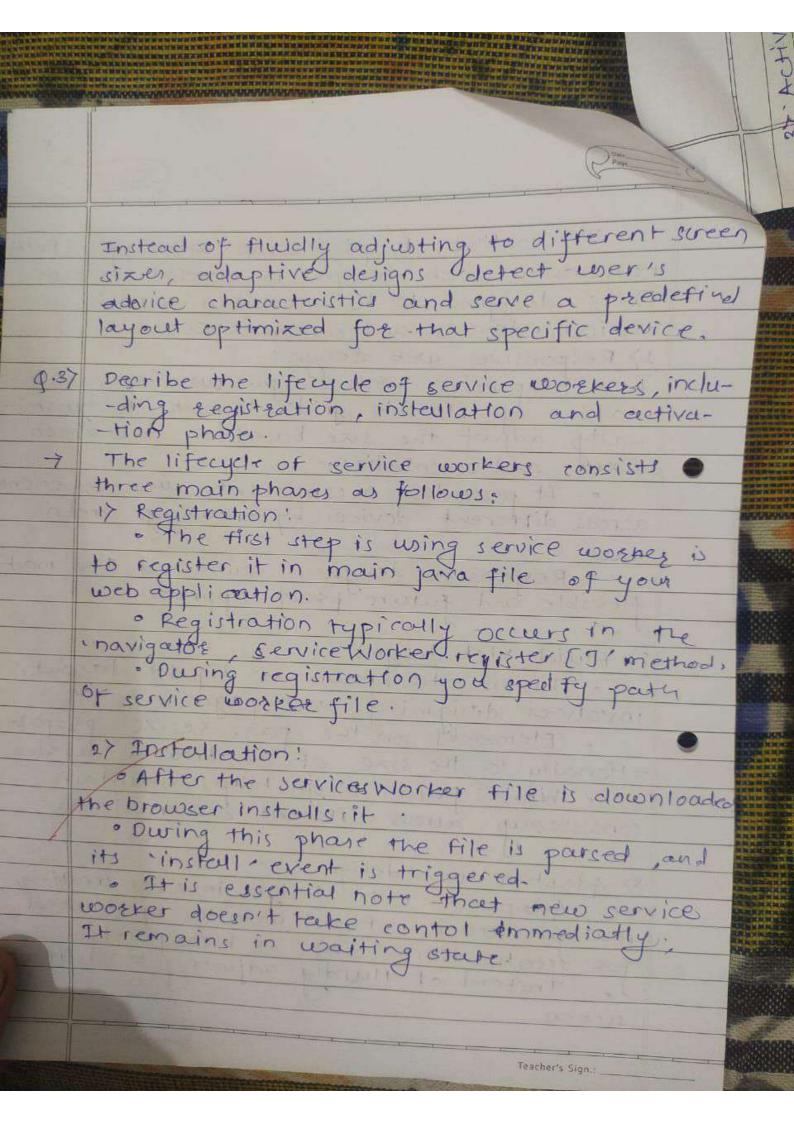
 consistency arross different coreen sizes.

 - 3) Adaptive web design!

 - · Adaptive web design involves creating multiple versions of a website optimized
 - for specific device size or break points.

 Instead of fluidly adjusting to diffrent

surcen



Page 34 Activation! . Once the installation is complete, the service worker enters the activation phase. . The activente event is triggered = · By default new service work doesn't take control of the pages immediatly. . Once activated and controlling the relevan pages, it is fully functional and performing other tasks as programmed. 9.4) Explain the use of indexed be in the service worker for data storage in short. -> Indexed DB is powerful is a clientside storrage mechanism available in webbrowser that allows web applications, including those service workers, to storage structured data peristentary utilization 1) Intialization; whithin service worker's instellation phase. developers can open or create indexed DB databases using the indexBB open() method. 27 Doublebone structure: Developers define structure of indexed DB database by creating object stores which are essentially containers for dates. 3> parter storage: Teacher's Sign.

service workers can store tata in indexed DB by adding, updating teleting, using indexed DB's API 47 Asynchronous operations: Means developers must use promises or call backs to handle dates retrieval and manipulation.

57 offline rapabilities! from the network and stock it in Indexed PB 67 Efficient dates handling! Indexed DE is sculable for handling large amounts of structured double efficiently requiring complex dates structure and retrieval. overally indexed DIB in service workers enables web applications to manage duta locally, proxiting offline support, especially in scenarios where network connectivity may be unavailable. TEXTENT SAT BALLY JAMES 31 Teacher's Sign.: _