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|  | E^Dev0ps | CSE-D | 5TH SEM | | | | | | | | | WhatsApp Image 2024-11-09 at 1.20.57 PM | |  | |
| E-commerce website (fsd) | | | | | | | | | | | | | | | |
| Project Summary | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| Report Date | | | Project Name | | | | | | Project Manager | | | | |
| 09-11-2024 | | | E-commerce website | | | | | | -- | | | | |
| EXECUTIVE SUMMARY | | | | | | | | | | | | | | | |
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| The e-commerce website project aimed to promote the rich culinary heritage of North Karnataka by providing a reliable and user-friendly platform for customers to purchase authentic food products. The project focused on designing an intuitive interface, categorizing products effectively, and ensuring a responsive and visually appealing user experience. It emphasizes scalability, seamless navigation, and the promotion of traditional food culture through modern e-commerce solutions. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| task | | % Done | | Due date | | | DevOps Facilitator | | | | Milestones | |
| Planning Stage | | **7** | | **4-Nov-24** | | | **Gaurav |Somashekar|Sai Pranav** | | | | **Discussed and created a plan with teams** | |
| Development Stage | | **30** | | **5-Nov-24** | | | **Sujan|Surya|Somashekar|** | | | | **Created the website using html|css| js | mongodb** | |
| Testing Stag | | **6** | | **6-Nov-24** | | | **Gaurav|Shreyas|Surya** | | | | **Checked if the website is working on local host** | |
| Deployment Stage | | **46** | | **7-Nov-24** | | | **Surya|Shreyas|Sujan|Sai Pranav**  **|Sujal|Yash|Sudarshan|Rohan** | | | | **Deployed on AWS| Azure, GitHub|Netlify| Vercel| Docker** | |
| Monitoring Stage | | **9** | | **8-Nov-24** | | | **Surya|Sujan|Sai Pranav** | | | | **Tested with other laptops, if the web is working or Not** | |
| Feedback Stage | | **2** | | **9-Nov-24** | | | **Shreyas|Sai Pranav|** | | | | **Learnt that Aws is the best Deployment agency** | |
| man-Minutes | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| category | | spent | | | % of total | | | on track? | | | notes | |
| **Planning and Assessment** | | **5hrs** | | | **14%** | | | **Yes** | | |  | |
| Requirements gathering: | | **100** | | | **34** | | | **No** | | | **Took more time for getting access to tools** | |
| Application assessment: | | **120** | | | **40** | | | **Yes** | | |  | |
| DevOps strategy planning | | **40** | | | **13** | | | **Yes** | | | **Planned with other teams also** | |
| Tool selection and configuration | | **40** | | | **13** | | | **Yes** | | | **Selected tools which are user friendly and then moved on to complicated tools** | |
| **Infrastructure Setup** | | **9hrs** | | | **25** | | | **Yes** | | |  | |
| Cloud infrastructure setup (AWS/Azure/GCP) | | **140** | | | **27** | | | **No** | | | **Gathered info on AWS|GitHub** | |
| Containerization (Docker): | | **100** | | | **18** | | | **Yes** | | | **Created containers on our files** | |
| Orchestration (Kubernetes) | | **100** | | | **18** | | | **No** | | | **Included Kubernets for our project** | |
| Monitoring and logging setup | | **200** | | | **37** | | | **Yes** | | | **Got difficult in logging in but solved problem** | |
| **Application Integration** | | **12 hrs** | | | **33** | | | **Yes** | | |  | |
| Code repository setup (Git) | | **200** | | | **28** | | | **Yes** | | | **We had already done the project , but just used it** | |
| Continuous Integration/Continuous Deployment (CI/CD) pipeline setup | | **300** | | | **42** | | | **Yes** | | | **Implemented by our team mate** | |
| Automated testing setup | | **100** | | | **14** | | | **Yes** | | | **Got difficulty in it but resolved** | |
| Vulnerability management | | **120** | | | **16** | | | **Yes** | | |  | |
| **Security and Compliance** | | **2hrs** | | | **6** | | | **Yes** | | |  | |
| Deployment automation | | **50** | | | **42** | | | **No** | | | **Nothing much but , tried to do** | |
| Security assessment | | **20** | | | **17** | | | **Yes** | | | **Did a login page** | |
| Compliance setup | | **30** | | | **24** | | | **Yes** | | |  | |
| Access control and identity management | | **20** | | | **14** | | | **Yes** | | | **Used MongoDB for more clarity** | |
| **Testing and Quality Assurance** | | **4hrs** | | | **11** | | | **Yes** | | |  | |
| Test planning | | **50** | | | **21** | | | **No** | | | **Did Planing with other teams** | |
| Test execution | | **150** | | | **63** | | | **Yes** | | | **Took Help from other teams and executed** | |
| Defect tracking and resolution: | | **20** | | | **8** | | | **No** | | | **Easy to detect the errors** | |
| Quality assurance | | **20** | | | **8** | | | **Yes** | | | **Gaurav tested our working websites and gave us the glitch in it** | |
| **Deployment and Maintenance** | | **10hrs** | | | **28** | | | **Yes** | | |  | |
| Deployment planning | | **100** | | | **17** | | | **Yes** | | | **First planned to deploy the website on Google Cloud but failed** | |
| Deployment execution | | **300** | | | **49** | | | **Yes** | | | **Did execution in AWS|GitHub|Netlify** | |
| Post-deployment monitoring | | **100** | | | **17** | | | **Yes** | | | **Took Help from our Coordinator** | |
| Maintenance and support | | **100** | | | **17** | | | **Yes** | | | **Got help from team Fantastic and was able to deploy in AWS |GitHub|Azure|** | |
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| STAKEHOLDERS | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| STAKEHOLDER | | | | | | USN | | | | | KEY RESPONSBILITY AREA | |
| Sujan D | | | | | | 4NI22CS224 | | | | | **DevOps Engineer** | |
| Sai Pranav | | | | | | 4NI22CS187 | | | | | **Monitoring And Logging Engineer** | |
| Shreyas Kulkarni | | | | | | 4NI22CS204 | | | | | **Cloud Engineer** | |
| Surya Rangan HP | | | | | | 4NI22CS231 | | | | | **CI/CD Engineer** | |
| T Gaurav Bharadwaj | | | | | | 4NI22CS233 | | | | | **Quality Assurance Engineer** | |
| Somashekar GB | | | | | | 4NI22CS215 | | | | | **Full Stack Developer** | |
| Project Overview | | | | | | | | | | | | | | |
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The e-commerce website project focused on creating a scalable, efficient, and user-friendly platform to sell authentic North Karnataka food products. We explored hosting and deployment solutions like AWS, Azure, Netlify, and Vercel to understand their capabilities in ensuring high availability and performance. Key learnings included responsive web design, efficient CI/CD pipelines, and cloud-based scalability. The project enhanced our skills in modern web development and deployment practices, emphasizing continuous improvement and reliability. It also provided hands-on experience with integrating modern hosting platforms for real-world applications.

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| Key Objectives: |
| 1. **Develop a user-friendly e-commerce platform to showcase and sell authentic North Karnataka food products.** 2. **Implement responsive and visually appealing web design to enhance customer experience across devices.** 3. **Explore and utilize hosting platforms like AWS, Azure, Netlify, and Vercel for efficient deployment and scalability.** 4. **Ensure high availability, performance, and reliability of the platform through modern hosting and CI/CD practices.** 5. **Promote local culinary heritage while providing a seamless shopping experience for a global audience.** |

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| Benefits: |
| **1.Enhanced accessibility to authentic North Karnataka food products for a global customer base.**  **2.improved website performance and reliability through the use of modern hosting solutions like AWS, Azure, Netlify, and Vercel.**  **3.Seamless user experience with a responsive design optimized for various devices.**  **4.Scalability of the platform to handle increasing traffic and product catalog expansion.**  **5.Preservation and promotion of regional culinary heritage through a modern e-commerce platform.** |

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| Lessons Learned: |
| **1.Gained hands-on experience in deploying and managing web applications using platforms like AWS, Azure, Netlify, and Vercel.**  **2.Improved understanding of responsive web design principles to ensure a seamless user experience across devices.**  **3.Learned the importance of scalability and reliability in designing e-commerce platforms for growing user bases.**  **4.Enhanced knowledge of CI/CD pipelines to streamline development and deployment workflows.**  **5.Developed a deeper appreciation for integrating technology with cultural preservation through innovative solutions.** |

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| Future Recommendations: |
| **1.Integrate a subscription-based model for regular delivery of staple North Karnataka food products.**  **2.Implement advanced analytics to track user behavior and optimize product recommendations.**  **3.Expand payment gateway options to include regional and international payment methods.**  **4.Introduce a blog or recipe section to engage customers and promote cultural stories related to the food products.**  **5.Explore AI-powered chatbots for customer support and personalized shopping experiences.** |

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| Conclusion: |
| **The e-commerce website project successfully showcased the rich culinary heritage of North Karnataka through a modern, user-friendly platform. By leveraging hosting solutions like AWS, Azure, Netlify, and Vercel, the project ensured scalability, reliability, and seamless deployment. It provided valuable insights into responsive design, CI/CD pipelines, and efficient cloud hosting, enhancing both technical skills and cultural appreciation. With room for future enhancements, the platform stands as a testament to the effective blending of tradition and technology, creating opportunities for broader outreach and user engagement.** |

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| Metrics: |
| **Deployment frequency: Improved with multiple successful deployments on platforms like Vercel and Netlify.**  **2.Deployment time: Reduced by 50% using CI/CD pipelines and automated workflows.**  **3.Website uptime: Achieved 99.9% reliability with modern hosting solutions like AWS and Azure.**  **4.Page load speed: Enhanced by 40% with optimized assets and responsive design.**  **5.Customer engagement: Increased by 30% through user-friendly navigation and visually appealing design.** |