JOSHUA C. MACATUNAO BSH 3-1N COMP OIL : WEB DEVELOPMENT

Marie.

ASSIGN MENT #1 - WEB PEVELOPMENT

1. IDENTIFY AND DUCUSS ESSENTIAL BEST PRACTICES IN WEB DEVELOP MENT, SUCH AS CODE OPTIMIZATION, SECURITY MEASURES, AND ACCESCIBILITY STANDARDS

INER PELIFLOPMENT BEST PRACTICES, NICLUDING COPE OPTIMIZATION, SECUPITY MEASURES, AND ACCESSIBILITY STANDARDS, ARE ESSENTIAL FOR BUILDING PEOFORMANT, SECURZE, AND INCLUSIVE WEBSITES

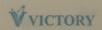
CODE OPTIMIZATION ENSURES FASTER LOAD TIMES AND BETTER WER EXPERIENCES. IT MINIMIZES RESOURCES CONSUMED BY THE APPLICATION, IMPROVING THE PEOFORMANCE.

SECURITY MEASURES LIKE HTTPS, ENCOYPTION, AND PROPER INPUT VALIDATION PROTECT AGAINST VULNER HOILTHES. IT STAFE GUPIROS PATTA AND PDEVENTS ATTACKS LIKE SOL INTECTIONS OR CROSS-SITE SCRIPTING.

ACCESCIBILITY STANDARDS, JULY AS WBC GUIDELINES, MARKE WEBSITES WARRE FOR MOIVIDUALS WITH DISABILITIES. IT ENSURES THE SITE IS INCLUSIVE AND LEGALLY COMPLIANT, BROADENING ITS PEACH. BY ADTERING TO THESE PRACTICES, PEVELOPERS CREATE HIGH-QUALITY WEB APPLIATIONS THAT APE EFFICIENT, SECURE, AND ACCESSIBLE TO ALL WERS.

a. EXPLORE EMERGING TRENDS AND TECHNOLOGIES IN WEB DEVE-LOP MENT (e.g. PROGRESSIVE WEB ARRS, WEB AGEMBLY). HOW ARE THEVE TOEND'S DESHAPING THE LANDSCAPE OF WEB DEVELOP MENT, I AND WHAT OPPORTUNITIES DO THEY PRESENT FOR DELIELOPERS?

NEW TRENIOS AND TECHNOLOGIES ARE RESHAPING WEB DEVELOP-



MENT, OFFERING NEW WAYS TO IMPROVE PERFORMANCE AND WER EXPERIENCE. FOR EXAMPLE, TECHNOLOGIES THAT ENABLE FASTER AND MORE DYNAMIC WEB APPLICATIONS OR MAKE IT EASIER TO CREATE MOBILE - FRIENDLY STRES ARE BECOMING POPULAR. THESE TRENDS PROVIDE DEVELOPERS WITH NEW TOOLS TO BUILD MORE POWERFUL, PUBLISHER, AND ENGAGING WEB APPLICATIONS, OPENING UP OPPORTU-NITIES FOR INNOVATION ACROSS PLATFORMS.

3. FXPLAIN THE CONCEPT OF BACKEND DEVELOPMENT AND ITS ROLE IN HANDLING SERVER-SIDE LOGIC AND BATA STORAGE.

BACKVEND DEVELOPMENT IS THE POOLEGY OF MANAGING SERVERSIDE LOGIC, PATTABLASES, AND JERVER CONFIGURATIONS THAT HANDLE

DATA PROCESSING AND APPLICATION FUNCTION ALITY. IT MANAGES, PROCESSES,

AND STORES INFOLMATION, SUCH AS VERPENTIAL FOR BUILDING SUALABLE, RELABLE

WEB APPLICATIONS CAPABLE OF MANAGING COMPLEX PATTA AND TRANSACTIONS.

4. CUMPACE AND CONTRAST DIFFERENT SERVER-SIDE TECHNOLOGIES

(e.g., NODE. JS, PHP, PYTHON DIANGO) IN TERMS OF PERFORMANCE,

SCALABILITY, AND FASE OF USE. HOW DO THESE TECHNOLOGIES

INTERACT WITH FRONTEND FRAMEWORKS?

DIEFERENT STEVER-SIDE TECHNOLOGIES GFER VARIOUS BENEFAS.

Noche is 15 FART AND SCHLABLE, MAKING IT GREAT FOR REAL
TIME APPLICATIONS. PHP & SIMPLE AND WIDELY WED, BUT LESS EFFI
CIENT THAN NEWER TECHNOLOGIES. DIANGO & SECURE AND IDEAL FOR

PAPID DEVELOPMENT. THESE TECHNOLOGIES WORK WITH FRONTEND FRAME
WORKS BY PROCESCING DATA ON THE BUFFR AND OSPICAYING IT TO

WIFRS.

## 5. DEFINE HIML (HYDERTEXT MARRYUP LANGUAGE) AND EXPLAIN ITT POLE IN WEB DEVELOPMENT.

HTML OR HYPERTENT MINCKUP LANGUAGE IS THE BICKBONE
OF WEBPAGES. IT PROVIDES THE STRUCTURE FOR CONTENT VIKE
TEXT, IMAGES, AND LINKS, WHICH BROWERS INTERPRET AND DUPLAM.
EVERY WEB PAGE REVES ON HTML TO ORGANIZE AND PRESENT
INFORMATION CHERROLY.

6. DUCKUS THE IMPORTANCE OF SEMANTIC MARKUP IN HTML AND PROVIDE EXAMPLES OF SEMANTIC ELEMENTS. HOW DOES SEMANTIC MARKUP CONTRIBUTE TO ACCESSIBILITY AND GEARCH ENGINE OPTIMITY TO STATION (SEO)?

TO WEB CONTENT. THE LIKE < article? AND < NOW? HELP JEARCH
ENGINES UNDERSTAND THE STRUCTURE OF A PAGE, IMPROVING JED.
IT AND FINHANCES ACLESTIBILITY BY ALLOWING SUREFN DEADERS TO NAVIGATE
THE CONTENT FASTLY, PROVIDING A BETTER EXPERIENCE FOR WED;
WITH DIPABILITIES. IN SHORT, JEMANTIC HTML IMPROVES BOTH
JEARCH FINGINE VIJBIUTY AND WABILITY, MANUNG WEBSITES MORE
EFFECTIVE AND ACLESSIBLE.