

TIKA RAM GIRLS COLLEGE SONEPAT

Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSORSONIA.....
 CLASS AND SECTIONM.Sc. 2nd YEAR (COMPUTER SCIENCE).....
 SUBJECTFULL STACK DEVELOPMENT - II.....

WEEK 1	DESCRIPTION
5-1-26	ADVANCED BACKEND DEVELOPMENT
6-1-26	"
7-1-26	"
8-1-26	"
9-1-26	MIDDLEWARE AND ERROR HANDLING
10-1-26	"
WEEK 2	
12-1-26	"
13-1-26	RELATIONAL DATABASES
14-1-26	"
15-1-26	"
16-1-26	"
17-1-26	"
WEEK 3	
19-1-26	MYSQL / POSTGRESQL BASICS AND ORMs (Sequelize)
20-1-26	"
21-1-26	"
22-1-26	"
24-1-26	"
WEEK 4	
27-1-26	ADVANCED REST API FEATURES
28-1-26	"
29-1-26	"
30-1-26	"
31-1-26	FILTERING, SORTING, PAGINATION,
WEEK 5	
2-2-26	INTRODUCTION TO GRAPHQL
3-2-26	"
4-2-26	"
5-2-26	"
6-2-26	"
7-2-26	"
WEEK 6	

9-2-26	CASE STUDY: BUILDING SCALABLE BACKEND APIS,
10-2-26	"
11-2-26	"
13-2-26	"
14-2-26	"
WEEK 7	
16-2-26	ADVANCED FRONTEND DEVELOPMENT
17-2-26	"
18-2-26	"
19-2-26	ADVANCED REACT JS: HOOKS,
20-2-26	"
21-2-26	"
WEEK 8	
23-2-26	CONTEXT API, AND REDUX
24-2-26	"
25-2-26	"
26-2-26	REACT ROUTER AND DYNAMIC ROUTING,
27-2-26	"
28-2-26	"
WEEK 9	
9-3-26	"
10-3-26	"
11-3-26	PERFORMANCE OPTIMIZATION IN REACT
12-3-26	"
13-3-26	"
14-3-26	"
WEEK 10	
16-3-26	SERVER-SIDE RENDERING (SSR) (SSG)
17-3-26	"
18-3-26	"
19-3-26	"
20-3-26	"
21-3-26	"
WEEK 11	

24-3-26	CASE STUDY: BUILDING A DYNAMIC FRONTEND
25-3-26	"
27-3-26	"
28-3-26	"
WEEK 12	
30-3-26	TESTING AND SECURITY
31-3-26	"
1-4-26	"
2-4-26	"
3-4-26	"

4-4-26	"
WEEK 13	
6-4-26	UNIT TESTING WITH JEST AND ENZYME
7-4-26	"
8-4-26	"
9-4-26	"
10-4-26	SECURITY PRACTICES
11-4-26	"
WEEK 14	
13-4-26	INPUT VALIDATION, XSS AND CSRF PROTECTION
15-4-26	"
16-4-26	"
17-4-26	USER AUTHENTICATION WITH PASSPORT-JS AND JWT.
18-4-26	"
WEEK 15	
20-4-26	CASE STUDY: BUILDING A DYNAMIC FRONTEND
21-4-26	"
22-4-26	"
23-4-26	IMPLEMENTING SECURE LOGIN AND ACCESS CONTROL
24-4-26	"
25-4-26	"
WEEK 16	
27-4-26	DEPLOYMENT AND ADVANCED TOOLS
28-4-26	"
29-4-26	"
30-4-26	"
1-5-26	"
2-5-26	"
WEEK 17	
4-5-26	CASE STUDY: DEPLOYING A SCALABLE APPLICATION WITH-
5-5-26	DOCKER AND KUBERNETES.
6-5-26	"

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NAME OF ASSISTANT/ASSOCIATE PROFESSOR Ms. Pooja Dahiya

CLASS AND SECTION M.Sc. Anal

SUBJECT Internet of Things

WEEK 1	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	
9-1-26	Intro. to IOT :- Definition, evolution, application IOT architecture : Perception, network, middleware Application layers.
10-1-26	
WEEK 2	
12-1-26	
13-1-26	
14-1-26	
15-1-26	Sensors & Actuators : Types Actuators
16-1-26	
17-1-26	Analog vs. Digital signals, ADC/DAC
WEEK 3	
19-1-26	
20-1-26	
21-1-26	
22-1-26	Embedded Systems Basics Microcontrollers vs. microprocessors
24-1-26	
WEEK 4	
27-1-26	
28-1-26	
29-1-26	GPIO interfacing, PWM, serial commu. " "
30-1-26	
31-1-26	Revision
WEEK 5	
2-2-26	
3-2-26	
4-2-26	
5-2-26	Test Microcontrollers & Microprocessors.
6-2-26	
7-2-26	IOT Communication Technologies
WEEK 6	

9-2-26		
10-2-26		
11-2-26		
13-2-26		
14-2-26		
Short range: BT, Zigbee, Wifi, RFID, NFC Long range: LoRaWAN, Sigfox, NB-IoT		
WEEK 7		
16-2-26		
17-2-26		
18-2-26		
19-2-26		
20-2-26		
21-2-26		
IoT Networking Protocols: MQTT, CoAP, HTTP, TCP, UDP, IPv4, IPv6		
WEEK 8		
23-2-26		
24-2-26		
25-2-26		
26-2-26		
27-2-26		
28-2-26		
Data Acquisition & Processing Data Processing		
WEEK 9		
9-3-26		
10-3-26		
11-3-26		
12-3-26		
13-3-26		
14-3-26		
Edge Computing Data storage: SD & EEPROM		
WEEK 10		
16-3-26		
17-3-26		
18-3-26		
19-3-26		
20-3-26		
21-3-26		
Revision Test IoT Security & Privacy		
WEEK 11		

24-3-26		
25-3-26		
27-3-26		
28-3-26		
Threats: Device tampering Data interception		
WEEK 12		
30-3-26		
31-3-26		
1-4-26		
2-4-26		
3-4-26		
DDoS attacks Case study: Mirai botnet attack		

4-4-26			
WEEK 13			
6-4-26		↑	↓
7-4-26			
8-4-26		↓	↑
9-4-26			
10-4-26			
11-4-26			
WEEK 14			
13-4-26		↑	↓
15-4-26			
16-4-26			
17-4-26			
18-4-26			
WEEK 15			
20-4-26		↑	↓
21-4-26			
22-4-26		↓	↑
23-4-26			
24-4-26			
25-4-26			
WEEK 16			
27-4-26		↑	↓
28-4-26			
29-4-26		↓	↑
30-4-26			
1-5-26			
2-5-26			
WEEK 17			
4-5-26		↑	↓
5-5-26			
6-5-26		↓	↑

Security Measures
 Device authentication (X.509, OAuth2)

Data encryption
 (TLS/SSL)
 MQTT | HTTP

Secure firmware updates
 OTA update

Cryptographic signatures
 Revision

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NAME OF ASSISTANT/ASSOCIATE PROFESSOR Ms. Pooja Dehya
 CLASS AND SECTION M.Sc IIInd
 SUBJECT Data Visualization

WEEK 1	DESCRIPTION
5-1-26	Intro. to DV: Importance & evolution Decision-making & Analytics Principles: Cognitive; Pre-attentive
6-1-26	
7-1-26	
8-1-26	
9-1-26	
10-1-26	
WEEK 2	
12-1-26	" Gestalt principles, & effective use of color Visual Encoding: Marks & Channels
13-1-26	
14-1-26	
15-1-26	
16-1-26	
17-1-26	
WEEK 3	
19-1-26	Data types (categorical, ordinal, quantitative) " Choosing in DT: Data Labeling & Annotations
20-1-26	
21-1-26	
22-1-26	
24-1-26	
WEEK 4	
27-1-26	Best practices annotations, legends & titles Test
28-1-26	
29-1-26	
30-1-26	
31-1-26	
WEEK 5	
2-2-26	Design Principles: Edward Tufte's design philosophy " Types of charts
3-2-26	
4-2-26	
5-2-26	
6-2-26	
7-2-26	
WEEK 6	

9-2-26	using of Bar charts, line charts scatter plots, histograms, heat maps.
10-2-26	
11-2-26	
12-2-26	
13-2-26	↑ ↓
14-2-26	
WEEK 7	
16-2-26	Data Preparation: Data cleaning Aggregation, summarization, Dealing with missing values
17-2-26	
18-2-26	
19-2-26	
20-2-26	↑ ↓
21-2-26	
WEEK 8	
23-2-26	Exploratory Data Analysis (EDA) mean, variance, skewness, kurtosis
24-2-26	
25-2-26	
26-2-26	
27-2-26	↑ ↓
28-2-26	
WEEK 9	
9-3-26	Test Advanced Visualization Techniques Multidimensional (pair plots, parallel, coordinates)
10-3-26	
11-3-26	
12-3-26	
13-3-26	↑ ↓
14-3-26	
WEEK 10	
16-3-26	Bubble charts, tree maps, dendrograms line graph, area charts & interactive timeline
17-3-26	
18-3-26	
19-3-26	
20-3-26	↑ ↓
21-3-26	
WEEK 11	

24-3-26	Introduction to Change: Overview interface and capabilities, exploring dataset
25-3-26	
27-3-26	
28-3-26	
	↑ ↓
WEEK 12	
30-3-26	Deriving actionable insights Creating basic visualization
31-3-26	
1-4-26	
2-4-26	
3-4-26	↑ ↓

9-2-26	using of bar charts, line charts scatter plots, histograms, heat maps.
10-2-26	
11-2-26	
13-2-26	
14-2-26	
WEEK 7	
16-2-26	Data Preparation: Data cleaning Aggregation, summarization, Dealing with missing values
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19-2-26	
20-2-26	
21-2-26	
WEEK 8	
23-2-26	Exploratory Data Analysis (EDA) mean, variance, skewness, kurtosis.
24-2-26	
25-2-26	
26-2-26	
27-2-26	
28-2-26	
WEEK 9	
9-3-26	Test Advanced Visualization Techniques Multidimensional (pair plots, parallel, coordinates)
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13-3-26	
14-3-26	
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16-3-26	Bubble charts, tree maps, dendrograms line graph, area charts & interactive timeline
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19-3-26	
20-3-26	
21-3-26	
WEEK 11	

24-3-26	Introduction to Change: Overview interface and capabilities, exploring dataset
25-3-26	
27-3-26	
28-3-26	
WEEK 12	
30-3-26	Deriving actionable insights Creating basic visualization
31-3-26	
1-4-26	
2-4-26	
3-4-26	

4-4-26			
WEEK 13			
6-4-26		Change workflows.	
7-4-26			
8-4-26		Test	
9-4-26		↑	↓
10-4-26			
11-4-26		↓	↑
WEEK 14			
13-4-26		Visualization widgets:	
15-4-26		↓ scatter plot, box plot, histogram	
16-4-26		↑	↓
17-4-26			
18-4-26		↓	↑
WEEK 15			
20-4-26		Heat map.	
21-4-26		Model-specific visualization	
22-4-26			
23-4-26		↑	↓
24-4-26			
25-4-26		↓	↑
WEEK 16			
27-4-26		Dendrogram silhouette plot	
28-4-26		Tree visualization	
29-4-26		"	
30-4-26		↑	↓
1-5-26			
2-5-26		↓	↑
WEEK 17			
4-5-26		Revision	
5-5-26		"	
6-5-26		"	

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NAME OF ASSISTANT/ASSOCIATE PROFESSOR Reena

CLASS AND SECTION M.Sc 2nd year

SUBJECT Mobile Application Development

WEEK	DESCRIPTION
5-1-26	
6-1-26	
7-1-26	
8-1-26	Introduction to Android Development History of Android Android versions
9-1-26	
10-1-26	
WEEK 2	
12-1-26	
13-1-26	
14-1-26	
15-1-26	Introduction to Android operating systems. Setting up the Android Studio IDE Android virtual device
16-1-26	
17-1-26	
WEEK 3	
19-1-26	
20-1-26	
21-1-26	Android Architecture and Components Android Manifest file
22-1-26	
24-1-26	
WEEK 4	
27-1-26	
28-1-26	
29-1-26	First Android Application Android Menu "
30-1-26	
31-1-26	
WEEK 5	
2-2-26	
3-2-26	
4-2-26	
5-2-26	User Interface Design XML Basics for layouts "
6-2-26	
7-2-26	
WEEK 6	

9-2-26	
10-2-26	
11-2-26	Text Views, Edit text Image view Customizing colors
13-2-26	
14-2-26	
WEEK 7	
16-2-26	
17-2-26	
18-2-26	
19-2-26	Activities and Intentes fragments Lifecycle and States
20-2-26	
21-2-26	
WEEK 8	
23-2-26	
24-2-26	
25-2-26	
26-2-26	Implicit and explicit intents.
27-2-26	
28-2-26	Navigation Between Screens.
WEEK 9	
9-3-26	
10-3-26	
11-3-26	
12-3-26	Data Storage and management
13-3-26	
14-3-26	SQLite Database
WEEK 10	
16-3-26	
17-3-26	
18-3-26	
19-3-26	Introduction to cloud Storage
20-3-26	
21-3-26	Firestore Realtime Database
WEEK 11	

24-3-26	
25-3-26	
27-3-26	Networking and APIs.
28-3-26	
WEEK 12	
30-3-26	
31-3-26	
1-4-26	
2-4-26	making HTTP Requests
3-4-26	

4-4-26	
WEEK 13	
6-4-26	
7-4-26	
8-4-26	
9-4-26	Implementation Authentication Authorization Publishing your App.
10-4-26	
11-4-26	
WEEK 14	
13-4-26	
15-4-26	
16-4-26	Publishing App. " "
17-4-26	
18-4-26	
WEEK 15	
20-4-26	
21-4-26	
22-4-26	
23-4-26	Multimedia and Sensors. " "
24-4-26	
25-4-26	
WEEK 16	
27-4-26	
28-4-26	
29-4-26	
30-4-26	Working with GitHub Notification and Alerts "
1-5-26	
2-5-26	
WEEK 17	
4-5-26	
5-5-26	
6-5-26	