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A

PROJECT REPORT ON
ONLINE ATTENDANCE SYSTEM

BACHELOR OF TECHNOLOGY

IN
COMPUTER SCIENCE ENGINEERING

UNDER THE GUIDANCE OF:-

SUBMITTED BY:-
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2. Sonu Kumar (CS190014)
3. Rajkumar Ram (CS190013)

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<u>CERTIFICATE</u>

This is to certify that the project work entitled 'Create Online attendance system , which is being submitted by Md Taseen Ansari, Rajkumar Ram and Sonu Kumar, fulfillment of award of degree of Bachelor of Technology in Computer Science Engineering from RCIT, Bishrampur, is carried out under my supervision and guidance.

Under the guidance of: -   Head of Department

Mr.Rajan Ranjan Prasad   Mr.Rup Kamal

Assistant Professor

RCIT,Bishrampur   RCIT,Bishrampur

ABSTRACT

This document is meant for describing all the features and procedures that were followed while developing the system. This document specially mentions the details of the project and how it was developed, the primary requirement, as well as various features And functionalities of the project and the procedures followed in achieving these objectives.

Over the years manual attendance management has been carried across most educational institutions. To overcome the problems of manual attendance, we have developed a "web based ONLINE ATTENDANCE SYSTEM". Attendance Management System is based on a web server, which can be implemented on any computer or Android Phone. In This application, NODE is server side language, ANGULAR and NODE is used as back-end design and HTML, CSS and Angular are used as front-end tools. The system communicates with databases residing on a remote server. It automatically calculates the attendance percentage of students Without any manual paper-based work. The system facilitates the end users with interactive design and automated processing of attendance management. With effective use, any Institute can apply the "ONLINE ATTENDANCE SYSTEM" for conducting quick attendance and getting better results in less time.

Department of Computer Science Engineering RCU, BISHRAMPUR

<u>ACKNOWLEDGEMENT</u>

I would first of all thank Mr. Rajan Ranjan Prasad who helped me to select such an important topic for my project work in which I received a nice exposure of my field and an innovation to do something in this field. It was very exciting along with interesting and amazing facts.

I wish to express our sincere thanks to Mr. RupKamal, Head of Department. I also express sincere thanks to the RCIT, Bishrampur for providing us with all the necessary facilities for completing the project work.

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CHAPTER 1

INTRODUCTION

<u>INTRODUCTION</u>

The project Online Attendance System is based on an online portal run by any organization which is able to make attendance digitally with minimum cost . It is based on the attendance management system.

Attendance management system is software developed for daily student attendance in institutes or organizations. It facilitates access to the attendance information of a particular student in a particular class.

It is simple based on a QR code scanning system in a secure manner. It basically generates QR code by organization with a specified branch. If an authorized user scans the QR code then the attendance of the user will be created in the organization database. Organization will be able to track the attendance records of all users.

CHAPTER 2

REQUIREMENTS AND SPECIFICATION

REQUIREMENT AND SPECIFICATION

HARDWARE REQUIREMENTS FOR PRESENT PROJECT:

PROCESSOR : Intel dual Core

,i3 RAM : 1 GB

HARD DISK : 80 GB

SOFTWARE REQUIREMENTS FOR PRESENT PROJECT:

OPERATING SYSTEM : Windows 7/ XP/8

FRONT END : Angular.

SERVER SIDE SCRIPT : Node Js

DATABASE : MongoDB

CHAPTER 3

ANALYSIS

ANALYSIS

BENEFITS OF ONLINE ATTENDANCE SYSTEM:

1. Cost-effective

How can an **attendance management system** minimize costs, it seems surreal? When it comes to manual tasks, it's essential to note that an organization is always exposed to expense. Maximum productivity with minimal error is the foundation of a successful business.

Many organizations have saved a significant amount of money by implementing an automated **attendance management system.**

2. Time saving

Adapting to the current technology of **attendance management programs** has proven to help manage time and transform the workplace atmosphere. It gives the benefit of reducing paperwork that ultimately saves time when it comes to collecting accurate attendance records for employees. With a few clicks, time-consuming activities like allocation of assignments manually, tracking shift changes, and so on can be monitored and assigned.

3. Accuracy in work

Accuracy in work is something that an organization needs the most. Lack of accuracy can cause errors, and resolving the same can be time-consuming and expensive. Manual data entry errors are unavoidable and costly. So applying an automated **attendance management program** provides accurate time records and reliable data about the actual performance of payroll software.

4. Secure and Reliable

Any organization that uses **an attendance and payroll system** enjoys the advantage of high security and reliability. Individual login IDs and passwords are used to provide security, and it means no employee can tamper the saved data of the **attendance device.**

5. Coordinated workflow

One of the most significant benefits of an **automated attendance** system is the ease with which workflow can be managed. With the correct procedure in place, the employer has clear access to attendance regularisation requests, leave requests, any overtime demands, and so on with essentially concise communication.

6. Eliminating manual error

Manual work is a tedious task, and it can create problems like absenteeism, delay in overtime payment, attendance punching, etc. Even if we offer our employees supporting aids, humans are prone to making mistakes. You can **download attendance** and **salary software** that can help you reduce manual errors.

7. Enhanced productivity

If organization resources aren't being used to their full capacity, productivity may decline. Attendance systems help you in tracking productivity and therefore enable you to correlate output with attendance. Moreover, each company has its attendance policy, which must evolve to support employees. The right attendance system will enable you to institute changes that will assist employees in becoming more productive without hampering their freedom.

With the help of **automated payroll software**, your company's productivity rises, as do the possibilities of future growth and expansion.

8. Easy accessibility to data

An organization must have access to reliable data to assess work efficiency and growth. Whether it's tracking employee activity or generating work reports regarding attendance, leave, overtime, and other topics, data accessibility is essential. An **automated attendance management** system can provide these benefits.

9. Workplace mobility

Companies have acknowledged the benefits of a work-from-home culture with the change in time. Nobody is obligated to sit in a specific location to verify job applicants or assign job responsibilities.

Even in a remote location, this software allows you to complete your duties without difficulty.

10. Eliminate data duplication.

Manually monitoring and managing attendance data increases the risk of data duplication. This means the employee will have to work twice as hard to complete the same task.

Because the HR department is involved with various tasks, including setting schedules, allowing leave, and overtime, any duplication can cause a monetary loss for the company. This **automated attendance system** removes the duplicity of data.

CHAPTER 4

TESTING

INTRODUCTION TO SYSTEM TESTING:

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub assemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of tests. Each test type addresses a specific testing requirement.

TYPES OF TESTING:

Unit testing: Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

Integration testing: Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfactory, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

Functional test: Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical

requirements, system documentation, and user manuals. Functional testing is centered on the following items: Valid Input : identified classes of valid input must be accepted. Invalid Input : identified classes of invalid input must be rejected. Functions : identified functions must be exercised. Output : identified classes of application outputs must be exercised. Systems/Procedures: interfacing systems or procedures must be invoked. Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identifying Business process flows; data fields, predefined processes, and successive processes must be considered for testing. Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

System Test: System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

White Box Testing: White Box Testing is a testing in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It has a purpose. It is used to test areas that cannot be reached from a black box level.

CHAPTER 5

SOURCE CODE

Frontend

Index.html

```html
<!DOCTYPE html><html lang="en"><head>
  <meta charset="utf-8">
  <title>Frontend</title>
  <base href="/">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
<style>@charset "UTF-8";:root{--bs-blue:#0d6efd;--bs-indigo:#6610f2;--bs-purple:#6f42c1;--bs-
pink:#d63384;--bs-red:#dc3545;--bs-orange:#fd7e14;--bs-yellow:#ffc107;--bs-green:#198754;--bs
-teal:#20c997;--bs-cyan:#0dcaf0;--bs-white:#fff;--bs-gray:#6c757d;--bs-gray-dark:#343a40;--bs
-gray-100:#f8f9fa;--bs-gray-200:#e9ecef;--bs-gray-300:#dee2e6;--bs-gray-400:#ced4da;--bs-gray
-500:#adb5bd;--bs-gray-600:#6c757d;--bs-gray-700:#495057;--bs-gray-800:#343a40;--bs-gray-900:
#212529;--bs-primary:#0d6efd;--bs-secondary:#6c757d;--bs-success:#198754;--bs-info:#0dcaf0;--
bs-warning:#ffc107;--bs-danger:#dc3545;--bs-light:#f8f9fa;--bs-dark:#212529;--bs-primary-rgb:
13,110,253;--bs-secondary-rgb:108,117,125;--bs-success-rgb:25,135,84;--bs-info-rgb:13,202,240
;--bs-warning-rgb:255,193,7;--bs-danger-rgb:220,53,69;--bs-light-rgb:248,249,250;--bs-dark-rg
b:33,37,41;--bs-white-rgb:255,255,255;--bs-black-rgb:0,0,0;--bs-body-color-rgb:33,37,41;--bs-
body-bg-rgb:255,255,255;--bs-font-sans-serif:system-ui,-apple-system,"Segoe UI",Roboto,"Helve
tica Neue",Arial,"Noto Sans","Liberation Sans",sans-serif,"Apple Color Emoji","Segoe UI Emoji
","Segoe UI Symbol","Noto Color Emoji";--bs-font-monospace:SFMono-Regular,Menlo,Monaco,Consol
as,"Liberation Mono","Courier New",monospace;--bs-gradient:linear-gradient(180deg, rgba(255,
255, 255, .15), rgba(255, 255, 255, 0));--bs-body-font-family:var(--bs-font-sans-serif);--bs-
body-font-size:1rem;--bs-body-font-weight:400;--bs-body-line-height:1.5;--bs-body-color:#2125
29;--bs-body-bg:#fff}*,:after,:before{box-sizing:border-box}@media (prefers-reduced-motion:no
-preference){:root{scroll-behavior:smooth}}body{margin:0;font-family:var(--bs-body-font-famil
y);font-size:var(--bs-body-font-size);font-weight:var(--bs-body-font-weight);line-height:var(
--bs-body-line-height);color:var(--bs-body-color);text-align:var(--bs-body-text-align);backgr
ound-color:var(--bs-body-bg);-webkit-text-size-adjust:100%;-webkit-tap-highlight-color:transp
arent}</style><link rel="stylesheet" href="styles.8d58886b09b054e5.css" media="print" onload=
"this.media='all'"><noscript><link rel="stylesheet" href="styles.8d58886b09b054e5.css"></nosc
ript></head>
<body>
  <app-root></app-root>
<script src="runtime.89bfad0fe920d2c9.js" type="module"></script><script src="polyfills.a8b0a
0fbe4a90d2a.js" type="module"></script><script src="main.49e6922b4aa7f99f.js" type="module"><
/script>

</body></html>
```

Main.js

```javascript
(self.webpackChunkfrontend=self.webpackChunkfrontend||[]).push([[179],{876:(Ie,I,O)=>{const T
=O(532),C=O(554),E=O(179),x=O(36);function M(B,F,G,ne,Ae){const K=[].slice.call(arguments,1),
J=K.length,Te="function"==typeof K[J-1];if(!Te&&!T())throw new Error("Callback required as la
st argument");if(!Te){if(J<1)throw new Error("Too few arguments provided");return 1===J?(G=F,
```

```
F=ne=void 0):2===J&&!F.getContext&&(ne=G,G=F,F=void 0),new Promise(function(Ge,Wt){try{const
ce=C.create(G,ne);Ge(B(ce,F,ne))}catch(ce){Wt(ce)}}})}if(J<2)throw new Error("Too few argument
s provided");2===J?(Ae=G,G=F,F=ne=void 0):3===J&&(F.getContext&&void 0===Ae?(Ae=ne,ne=void 0)
:(Ae=ne,ne=G,G=F,F=void 0));try{const Ge=C.create(G,ne);Ae(null,B(Ge,F,ne))}catch(Ge){Ae(Ge)}
}I.rT=M.bind(null,E.render),I.hz=M.bind(null,E.renderToDataURL),I.toString=M.bind(null,functi
on(B,F,G){return x.render(B,G)})},532:Ie=>{Ie.exports=function(){return"function"==typeof Pro
mise&&Promise.prototype&&Promise.prototype.then}},12:(Ie,I,O)=>{const D=O(860).getSymbolSize;
I.getRowColCoords=function(C){if(1===C)return[];const E=Math.floor(C/7)+2,x=D(C),M=145===x?26
:2*Math.ceil((x-13)/(2*E-2)),B=[x-7];for(let F=1;F<E-1;F++)B[F]=B[F-1]-M;return B.push(6),B.r
everse()},I.getPositions=function(C){const E=[],x=I.getRowColCoords(C),M=x.length;for(let B=0
;B<M;B++)for(let F=0;F<M;F++)0===B&&0===F||0===B&&F===M-1||B===M-1&&0===F||E.push([x[B],x[F]]
);return E}},812:(Ie,I,O)=>{const D=O(906),T=["0","1","2","3","4","5","6","7","8","9","A","B"
,"C","D","E","F","G","H","I","J","K","L","M","N","O","P","Q","R","S","T","U","V","W","X","Y",
"Z"," ","$","%","*","+","-",".","/",":"];function C(E){this.mode=D.ALPHANUMERIC,this.data=E}C
.getBitsLength=function(x){return 11*Math.floor(x/2)+x%2*6},C.prototype.getLength=function(){
return this.data.length},C.prototype.getBitsLength=function(){return C.getBitsLength(this.dat
a.length)},C.prototype.write=function(x){let M;for(M=0;M+2<=this.data.length;M+=2){let B=45*T
.indexOf(this.data[M]);B+=T.indexOf(this.data[M+1]),x.put(B,11)}this.data.length%2&&x.put(T.i
ndexOf(this.data[M]),6)},Ie.exports=C},44:Ie=>{function I(){this.buffer=[],this.length=0}I.pr
ototype={get:function(O){const D=Math.floor(O/8);return 1==(this.buffer[D]>>>7-O%8&1)},put:fu
nction(O,D){for(let T=0;T<D;T++)this.putBit(1==(O>>>D-T-1&1))},getLengthInBits:function(){ret
urn this.length},putBit:function(O){const D=Math.floor(this.length/8);this.buffer.length<=D&&
this.buffer.push(0),O&&(this.buffer[D]|=128>>>this.length%8),this.length++}},Ie.exports=I},97
3:Ie=>{function I(O){if(!O||O<1)throw new Error("BitMatrix size must be defined and greater t
han 0");this.size=O,this.data=new Uint8Array(O*O),this.reservedBit=new Uint8Array(O*O)}I.prot
otype.set=function(O,D,T,C){const E=O*this.size+D;this.data[E]=T,C&&(this.reservedBit[E]=!0)}
,I.prototype.get=function(O,D){return this.data[O*this.size+D]},I.prototype.xor=function(O,D,
T){this.data[O*this.size+D]^=T},I.prototype.isReserved=function(O,D){return this.reservedBit[
O*this.size+D]},Ie.exports=I},824:(Ie,I,O)=>{const D=O(419),T=O(906);function C(E){this.mode=
T.BYTE,this.data=new Uint8Array(D(E))}C.getBitsLength=function(x){return 8*x},C.prototype.get
Length=function(){return this.data.length},C.prototype.getBitsLength=function(){return C.getB
itsLength(this.data.length)},C.prototype.write=function(E){for(let x=0,M=this.data.length;x<M
;x++)E.put(this.data[x],8)},Ie.exports=C},194:(Ie,I,O)=>{const D=O(20),T=[1,1,1,1,1,1,1,1,1,1
,2,2,1,2,2,4,1,2,4,4,2,4,4,4,2,4,6,5,2,4,6,6,2,5,8,8,4,5,8,8,4,5,8,11,4,8,10,11,4,9,12,16,4,9
,16,16,6,10,12,18,6,10,17,16,6,11,16,19,6,13,18,21,7,14,21,25,8,16,20,25,8,17,23,25,9,17,23,3
4,9,18,25,30,10,20,27,32,12,21,29,35,12,23,34,37,12,25,34,40,13,26,35,42,14,28,38,45,15,29,40
,48,16,31,43,51,17,33,45,54,18,35,48,57,19,37,51,60,19,38,53,63,20,40,56,66,21,43,59,70,22,45
,62,74,24,47,65,77,25,49,68,81],C=[7,10,13,17,10,16,22,28,15,26,36,44,20,36,52,64,26,48,72,88
,36,64,96,112,40,72,108,130,48,88,132,156,60,110,160,192,72,130,192,224,80,150,224,264,96,176
,260,308,104,198,288,352,120,216,320,384,132,240,360,432,144,280,408,480,168,308,448,532,180,
338,504,588,196,364,546,650,224,416,600,700,224,442,644,750,252,476,690,816,270,504,750,900,3
00,560,810,960,312,588,870,1050,336,644,952,1110,360,700,1020,1200,390,728,1050,1260,420,784,
1140,1350,450,812,1200,1440,480,868,1290,1530,510,924,1350,1620,540,980,1440,1710,570,1036,15
30,1800,570,1064,1590,1890,600,1120,1680,1980,630,1204,1770,2100,660,1260,1860,2220,720,1316,
1950,2310,750,1372,2040,2430];I.getBlocksCount=function(x,M){switch(M){case D.L:return T[4*(x
-1)+0];case D.M:return T[4*(x-1)+1];case D.Q:return T[4*(x-1)+2];case D.H:return T[4*(x-1)+3]
;default:return}},I.getTotalCodewordsCount=function(x,M){switch(M){case D.L:return C[4*(x-1)+
0];case D.M:return C[4*(x-1)+1];case D.Q:return C[4*(x-1)+2];case D.H:return C[4*(x-1)+3];def
ault:return}}},20:(Ie,I)=>{I.L={bit:1},I.M={bit:0},I.Q={bit:3},I.H={bit:2},I.isValid=function
(T){return T&&void 0!==T.bit&&T.bit>=0&&T.bit<4},I.from=function(T,C){if(I.isValid(T))return
T;try{return function O(D){if("string"!=typeof D)throw new Error("Param is not a string");swi
tch(D.toLowerCase()){case"l":case"low":return I.L;case"m":case"medium":return I.M;case"q":cas
e"quartile":return I.Q;case"h":case"high":return I.H;default:throw new Error("Unknown EC Leve
l: "+D)}}(T)}catch(E){return C}}},172:(Ie,I,O)=>{const D=O(860).getSymbolSize;I.getPositions=
function(E){const x=D(E);return[[0,0],[x-7,0],[0,x-7]]}},611:(Ie,I,O)=>{const D=O(860),E=D.ge
tBCHDigit(1335);I.getEncodedBits=function(M,B){const F=M.bit<<3|B;let G=F<<10;for(;D.getBCHDi
git(G)-E>=0;)G^=1335<<D.getBCHDigit(G)-E;return 21522^(F<<10|G)}},794:(Ie,I)=>{const O=new Ui
nt8Array(512),D=new Uint8Array(256);(function(){let C=1;for(let E=0;E<255;E++)O[E]=C,D[C]=E,C
```

```
<<=1,256&C&&(C^=285);for(let E=255;E<512;E++)O[E]=O[E-255]})(),I.log=function(C){if(C<1)throw
new Error("log("+C+")");return D[C]},I.exp=function(C){return O[C]},I.mul=function(C,E){retu
rn 0===C||0===E?0:O[D[C]+D[E]]}},43:(Ie,I,O)=>{const D=O(906),T=O(860);function C(E){this.mod
e=D.KANJI,this.data=E}C.getBitsLength=function(x){return 13*x},C.prototype.getLength=function
(){return this.data.length},C.prototype.getBitsLength=function(){return C.getBitsLength(this.
data.length)},C.prototype.write=function(E){let x;for(x=0;x<this.data.length;x++){let M=T.toS
JIS(this.data[x]);if(M>=33088&&M<=40956)M-=33088;else{if(!(M>=57408&&M<=60351))throw new Erro
r("Invalid SJIS character: "+this.data[x]+"\nMake sure your charset is UTF-8");M-=49472}M=192
*(M>>8&255)+(255&M),E.put(M,13)}},Ie.exports=C},135:(Ie,I)=>{I.Patterns={PATTERN000:0,PATTER
N001:1,PATTERN010:2,PATTERN011:3,PATTERN100:4,PATTERN101:5,PATTERN110:6,PATTERN111:7};functio
n D(T,C,E){switch(T){case I.Patterns.PATTERN000:return(C+E)%2==0;case I.Patterns.PATTERN001:r
eturn C%2==0;case I.Patterns.PATTERN010:return E%3==0;case I.Patterns.PATTERN011:return(C+E)%
3==0;case I.Patterns.PATTERN100:return(Math.floor(C/2)+Math.floor(E/3))%2==0;case I.Patterns.
PATTERN101:return C*E%2+C*E%3==0;case I.Patterns.PATTERN110:return(C*E%2+C*E%3)%2==0;case I.P
atterns.PATTERN111:return(C*E%3+(C+E)%2)%2==0;default:throw new Error("bad maskPattern:"+T)}}
I.isValid=function(C){return null!=C&&""!==C&&!isNaN(C)&&C>=0&&C<=7},I.from=function(C){retur
n I.isValid(C)?parseInt(C,10):void 0},I.getPenaltyN1=function(C){const E=C.size;let x=0,M=0,B
=0,F=null,G=null;for(let ne=0;ne<E;ne++){M=B=0,F=G=null;for(let Ae=0;Ae<E;Ae++){let K=C.get(n
e,Ae);K===F?M++:(M>=5&&(x+=M-5+3),F=K,M=1),K=C.get(Ae,ne),K===G?B++:(B>=5&&(x+=B-5+3),G=K,B=1
)}M>=5&&(x+=M-5+3),B>=5&&(x+=B-5+3)}return x},I.getPenaltyN2=function(C){const E=C.size;let x
=0;for(let M=0;M<E-1;M++)for(let B=0;B<E-1;B++){const F=C.get(M,B)+C.get(M,B+1)+C.get(M+1,B)+
C.get(M+1,B+1);(4===F||0===F)&&x++}return 3*x},I.getPenaltyN3=function(C){const E=C.size;let
x=0,M=0,B=0;for(let F=0;F<E;F++){M=B=0;for(let G=0;G<E;G++)M=M<<1&2047|C.get(F,G),G>=10&&(148
8===M||93===M)&&x++,B=B<<1&2047|C.get(G,F),G>=10&&(1488===B||93===B)&&x++}return 40*x},I.getP
enaltyN4=function(C){let E=0;const x=C.data.length;for(let B=0;B<x;B++)E+=C.data[B];return 10
*Math.abs(Math.ceil(100*E/x/5)-10)},I.applyMask=function(C,E){const x=E.size;for(let M=0;M<x;
M++)for(let B=0;B<x;B++)E.isReserved(B,M)||E.xor(B,M,D(C,B,M))},I.getBestMask=function(C,E){c
onst x=Object.keys(I.Patterns).length;let M=0,B=1/0;for(let F=0;F<x;F++){E(F),I.applyMask(F,C
);const G=I.getPenaltyN1(C)+I.getPenaltyN2(C)+I.getPenaltyN3(C)+I.getPenaltyN4(C);I.applyMask
(F,C),G<B&&(B=G,M=F)}return M}},906:(Ie,I,O)=>{const D=O(316),T=O(677);I.NUMERIC={id:"Numeric
",bit:1,ccBits:[10,12,14]},I.ALPHANUMERIC={id:"Alphanumeric",bit:2,ccBits:[9,11,13]},I.BYTE={
id:"Byte",bit:4,ccBits:[8,16,16]},I.KANJI={id:"Kanji",bit:8,ccBits:[8,10,12]},I.MIXED={bit:-1
},I.getCharCountIndicator=function(x,M){if(!x.ccBits)throw new Error("Invalid mode: "+x);if(!
D.isValid(M))throw new Error("Invalid version: "+M);return M>=1&&M<10?x.ccBits[0]:M<27?x.ccBi
ts[1]:x.ccBits[2]},I.getBestModeForData=function(x){return T.testNumeric(x)?I.NUMERIC:T.testA
lphanumeric(x)?I.ALPHANUMERIC:T.testKanji(x)?I.KANJI:I.BYTE},I.toString=function(x){if(x&&x.i
d)return x.id;throw new Error("Invalid mode")},I.isValid=function(x){return x&&x.bit&&x.ccBit
s},I.from=function(x,M){if(I.isValid(x))return x;try{return function C(E){if("string"!=typeof
E)throw new Error("Param is not a string");switch(E.toLowerCase()){case"numeric":return I.NU
MERIC;case"alphanumeric":return I.ALPHANUMERIC;case"kanji":return I.KANJI;case"byte":return I
.BYTE;default:throw new Error("Unknown mode: "+E)}}(x)}catch(B){return M}}},2:(Ie,I,O)=>{cons
t D=O(906);function T(C){this.mode=D.NUMERIC,this.data=C.toString()}T.getBitsLength=function(
E){return 10*Math.floor(E/3)+(E%3?E%3*3+1:0)},T.prototype.getLength=function(){return this.da
ta.length},T.prototype.getBitsLength=function(){return T.getBitsLength(this.data.length)},T.p
rototype.write=function(E){let x,M,B;for(x=0;x+3<=this.data.length;x+=3)M=this.data.substr(x,
3),B=parseInt(M,10),E.put(B,10);const F=this.data.length-x;F>0&&(M=this.data.substr(x),B=pars
eInt(M,10),E.put(B,3*F+1))},Ie.exports=T},793:(Ie,I,O)=>{const D=O(794);I.mul=function(C,E){c
onst x=new Uint8Array(C.length+E.length-1);for(let M=0;M<C.length;M++)for(let B=0;B<E.length;
B++)x[M+B]^=D.mul(C[M],E[B]);return x},I.mod=function(C,E){let x=new Uint8Array(C);for(;x.len
gth-E.length>=0;){const M=x[0];for(let F=0;F<E.length;F++)x[F]^=D.mul(E[F],M);let B=0;for(;B<
x.length&&0===x[B];)B++;x=x.slice(B)}return x},I.generateECPolynomial=function(C){let E=new U
int8Array([1]);for(let x=0;x<C;x++)E=I.mul(E,new Uint8Array([1,D.exp(x)]));return E}},554:(Ie
,I,O)=>{const D=O(860),T=O(20),C=O(44),E=O(973),x=O(12),M=O(172),B=O(135),F=O(194),G=O(98),ne
=O(602),Ae=O(611),K=O(906),J=O(465);function Me(re,_e,ie){const Q=re.size,Ne=Ae.getEncodedBit
s(_e,ie);let fe,te;for(fe=0;fe<15;fe++)te=1==(Ne>>fe&1),re.set(fe<6?fe:fe<8?fe+1:Q-15+fe,8,te
,!0),re.set(8,fe<8?Q-fe-1:fe<9?15-fe-1+1:15-fe-1,te,!0);re.set(Q-8,8,1,!0)}function hn(re,_e,
ie,Q){let Ne;if(Array.isArray(re))Ne=J.fromArray(re);else{if("string"!=typeof re)throw new Er
ror("Invalid data");{let Or=_e;if(!Or){const Xe=J.rawSplit(re);Or=ne.getBestVersionForData(Xe
```

```
,ie)}Ne=J.fromString(re,Or||40)}}const fe=ne.getBestVersionForData(Ne,ie);if(!fe)throw new Er
ror("The amount of data is too big to be stored in a QR Code");if(_e){if(_e<fe)throw new Erro
r("\nThe chosen QR Code version cannot contain this amount of data.\nMinimum version required
 to store current data is: "+fe+".\n")}else _e=fe;const te=function me(re,_e,ie){const Q=new
C;ie.forEach(function(Re){Q.put(Re.mode.bit,4),Q.put(Re.getLength(),K.getCharCountIndicator(R
e.mode,re)),Re.write(Q)});const te=8*(D.getSymbolTotalCodewords(re)-F.getTotalCodewordsCount(
re,_e));for(Q.getLengthInBits()+4<=te&&Q.put(0,4);Q.getLengthInBits()%8!=0;)Q.putBit(0);const
he=(te-Q.getLengthInBits())/8;for(let Re=0;Re<he;Re++)Q.put(Re%2?17:236,8);return function z
t(re,_e,ie){const Q=D.getSymbolTotalCodewords(_e),fe=Q-F.getTotalCodewordsCount(_e,ie),te=F.g
etBlocksCount(_e,ie),Re=te-Q%te,Or=Math.floor(Q/te),Xe=Math.floor(fe/te),ec=Xe+1,tc=Or-Xe,Gd=
new G(tc);let ps=0;const dt=new Array(te),gs=new Array(te);let ta=0;const It=new Uint8Array(r
e.buffer);for(let _o=0;_o<te;_o++){const na=_o<Re?Xe:ec;dt[_o]=It.slice(ps,ps+na),gs[_o]=Gd.e
ncode(dt[_o]),ps+=na,ta=Math.max(ta,na)}const at=new Uint8Array(Q);let pe,ar,nc=0;for(pe=0;pe
<ta;pe++)for(ar=0;ar<te;ar++)pe<dt[ar].length&&(at[nc++]=dt[ar][pe]);for(pe=0;pe<tc;pe++)for(
ar=0;ar<te;ar++)at[nc++]=gs[ar][pe];return at}(Q,re,_e)}(_e,ie,Ne),he=D.getSymbolSize(_e),Re=
new E(he);return function Te(re,_e){const ie=re.size,Q=M.getPositions(_e);for(let Ne=0;Ne<Q.l
ength;Ne++){const fe=Q[Ne][0],te=Q[Ne][1];for(let he=-1;he<=7;he++)if(!(fe+he<=-1||ie<=fe+he)
)for(let Re=-1;Re<=7;Re++)te+Re<=-1||ie<=te+Re||re.set(fe+he,te+Re,he>=0&&he<=6&&(0===Re||6==
=Re)||Re>=0&&Re<=6&&(0===he||6===he)||he>=2&&he<=4&&Re>=2&&Re<=4,!0)}}(Re,_e),function Ge(re)
{const _e=re.size;for(let ie=8;ie<_e-8;ie++){const Q=ie%2==0;re.set(ie,6,Q,!0),re.set(6,ie,Q,
!0)}}(Re),function Wt(re,_e){const ie=x.getPositions(_e);for(let Q=0;Q<ie.length;Q++){const N
e=ie[Q][0],fe=ie[Q][1];for(let te=-2;te<=2;te++)for(let he=-2;he<=2;he++)re.set(Ne+te,fe+he,-
2===te||2===te||-2===he||2===he||0===te&&0===he,!0)}}(Re,_e),Me(Re,ie,0),_e>=7&&function ce(r
e,_e){const ie=re.size,Q=ne.getEncodedBits(_e);
```

Styles.css

```
*/:root{--bs-blue:#0d6efd;--bs-indigo:#6610f2;--bs-purple:#6f42c1;--bs-pink:#d63384;--bs-red:
#dc3545;--bs-orange:#fd7e14;--bs-yellow:#ffc107;--bs-green:#198754;--bs-teal:#20c997;--bs-cya
n:#0dcaf0;--bs-white:#fff;--bs-gray:#6c757d;--bs-gray-dark:#343a40;--bs-gray-100:#f8f9fa;--bs
-gray-200:#e9ecef;--bs-gray-300:#dee2e6;--bs-gray-400:#ced4da;--bs-gray-500:#adb5bd;--bs-gray
-600:#6c757d;--bs-gray-700:#495057;--bs-gray-800:#343a40;--bs-gray-900:#212529;--bs-primary:#
0d6efd;--bs-secondary:#6c757d;--bs-success:#198754;--bs-info:#0dcaf0;--bs-warning:#ffc107;--b
s-danger:#dc3545;--bs-light:#f8f9fa;--bs-dark:#212529;--bs-primary-rgb:13,110,253;--bs-second
ary-rgb:108,117,125;--bs-success-rgb:25,135,84;--bs-info-rgb:13,202,240;--bs-warning-rgb:255,
193,7;--bs-danger-rgb:220,53,69;--bs-light-rgb:248,249,250;--bs-dark-rgb:33,37,41;--bs-white-
rgb:255,255,255;--bs-black-rgb:0,0,0;--bs-body-color-rgb:33,37,41;--bs-body-bg-rgb:255,255,25
5;--bs-font-sans-serif:system-ui,-apple-system,"Segoe UI",Roboto,"Helvetica Neue",Arial,"Noto
Sans","Liberation Sans",sans-serif,"Apple Color Emoji","Segoe UI Emoji","Segoe UI Symbol","N
oto Color Emoji";--bs-font-monospace:SFMono-Regular,Menlo,Monaco,Consolas,"Liberation Mono","
Courier New",monospace;--bs-gradient:linear-gradient(180deg, rgba(255, 255, 255, .15), rgba(2
55, 255, 255, 0));--bs-body-font-family:var(--bs-font-sans-serif);--bs-body-font-size:1rem;--
bs-body-font-weight:400;--bs-body-line-height:1.5;--bs-body-color:#212529;--bs-body-bg:#fff}*
,:after,:before{box-sizing:border-box}@media (prefers-reduced-motion:no-preference){:root{scr
oll-behavior:smooth}}body{margin:0;font-family:var(--bs-body-font-family);font-size:var(--bs-
body-font-size);font-weight:var(--bs-body-font-weight);line-height:var(--bs-body-line-height)
;color:var(--bs-body-color);text-align:var(--bs-body-text-align);background-color:var(--bs-bo
dy-bg);
```

Backend

App.js

```
#!/usr/bin/env node

/**
 * Module dependencies.
 */

var app = require('../app');
var debug = require('debug')('backend:server');
var http = require('http');

/**
 * Get port from environment and store in Express.
 */

var port = normalizePort(process.env.PORT || '3000');
app.set('port', port);

/**
 * Create HTTP server.
 */

var server = http.createServer(app);

/**
 * Listen on provided port, on all network interfaces.
 */

server.listen(port);
server.on('error', onError);
server.on('listening', onListening);

/**
 * Normalize a port into a number, string, or false.
 */

function normalizePort(val) {
  var port = parseInt(val, 10);
```

```javascript
  if (isNaN(port)) {
    // named pipe
    return val;
  }

  if (port >= 0) {
    // port number
    return port;
  }

  return false;
}

/**
 * Event listener for HTTP server "error" event.
 */

function onError(error) {
  if (error.syscall !== 'listen') {
    throw error;
  }

  var bind = typeof port === 'string'
    ? 'Pipe ' + port
    : 'Port ' + port;

  // handle specific listen errors with friendly messages
  switch (error.code) {
    case 'EACCES':
      console.error(bind + ' requires elevated privileges');
      process.exit(1);
      break;
    case 'EADDRINUSE':
      console.error(bind + ' is already in use');
      process.exit(1);
      break;
    default:
      throw error;
  }
}

/**
 * Event listener for HTTP server "listening" event.
 */

function onListening() {
  var addr = server.address();
  var bind = typeof addr === 'string'
    ? 'pipe ' + addr
    : 'port ' + addr.port;
  debug('Listening on ' + bind);
}
```

Management.js

```javascript
const studentModal = require('../modals/student.modal');
const teacherModal = require('../modals/teacher.modal');
const {attendenceId,studentAttendance} = require('../modals/management.modal')
const qrcode = require('qrcode')
module.exports.addStudent = async (req ,res , next)=>{
    try{
        const student = new studentModal(req.body);
        await student.save()
        res.send(student);
    }
    catch(err){
        console.log(err.message);
    }
}

module.exports.addTeacher = async (req ,res , next)=>{
    try{
        const teacher = new teacherModal(req.body);
        await teacher.save()
        res.send(teacher);
    }
    catch(err){
        console.log(err.message);
    }
}

module.exports.createAttandenceID = async (req ,res , next)=>{
    try{
        const ID = new attendenceId(req.body);
        await ID.save()
        res.send(ID);
    }
    catch(err){
        console.log(err.message);
    }
}

module.exports.makeAttendance = async (req ,res , next)=>{
    try{
        const ID = await attendenceId.find({_id:req.body.id})

        const studentAttendance = new studentAttendance({
            student:req.body.student,
            teacher:ID.facultyId,
            subject:ID.subject
        });
    }
    catch(err){
        console.log(err.message);
    }
}
```

Connection.js

```javascript
const mongoose = require('mongoose');
mongoose.connect('mongodb+srv://taseenansari:taseen12345@cluster0.2o2yq.mongodb.net/attendanc
e')
.then(()=>console.log("connect to mongodb"))
.catch((err)=>console.error(err.message));



module.exports = mongoose
```

management.model.js

```javascript
const mongoose = require('mongoose')

const studentAttendance =  mongoose.model('studentAttendance',new mongoose.Schema({
    student:{
        type:mongoose.Schema.Types.ObjectId,
        ref:'student'
    },
    date:{
        type:Date,
        default:Date.now()
    },
    subject:{
        type:String,
        required:true
    },
    faculty:{
        type:mongoose.Schema.Types.ObjectId,
        ref:'teacher'
    }
}))


const attendenceId =  mongoose.model('attendanceId',new mongoose.Schema({
    facultyId:{
        type:String,
        required:true,
    },
    subject:{
        type:String,
        required:true
    },
    subjectCode:{
        type:Number
```

```
    },
    createdOn:{
        type:Date,
        default:Date.now()
    }
}))

module.exports = {attendenceId,studentAttendance}
```

student.model.js

```
const mongoose = require('mongoose')

const studentModal =  mongoose.model('student',new mongoose.Schema({
    name:{
        type:String,
        required:true,
    },
    rollNumber:{
        type:String,
        required:true,
    },
    session:{
        type:Number,
        required:true
    },
    branch:{
        type:String,
        required:true
    },
}))

module.exports = studentModal
```

teacher.model.js

```javascript
const mongoose = require('mongoose')

const studentModal =  mongoose.model('teacher',new mongoose.Schema({
    name:{
        type:String,
        required:true,
    },
    branch:{
        type:String,
        required:true,
    },
    employId:{
        type:String,
        required:true
    },

}))



module.exports = studentModal
```

management.route.js

```javascript
const {addStudent,addTeacher,createAttandenceID ,makeAttendance} = require('../controllers/management')

const router = require('express').Router()


router.post('/student',addStudent);

router.post('/teacher',addTeacher);

router.post('/createid',createAttandenceID);
router.post('/attendance',makeAttendance);

module.exports = router
```

CHAPTER 6

SCREENSHOTS

SCREENSHOTS:

HOME PAGE:
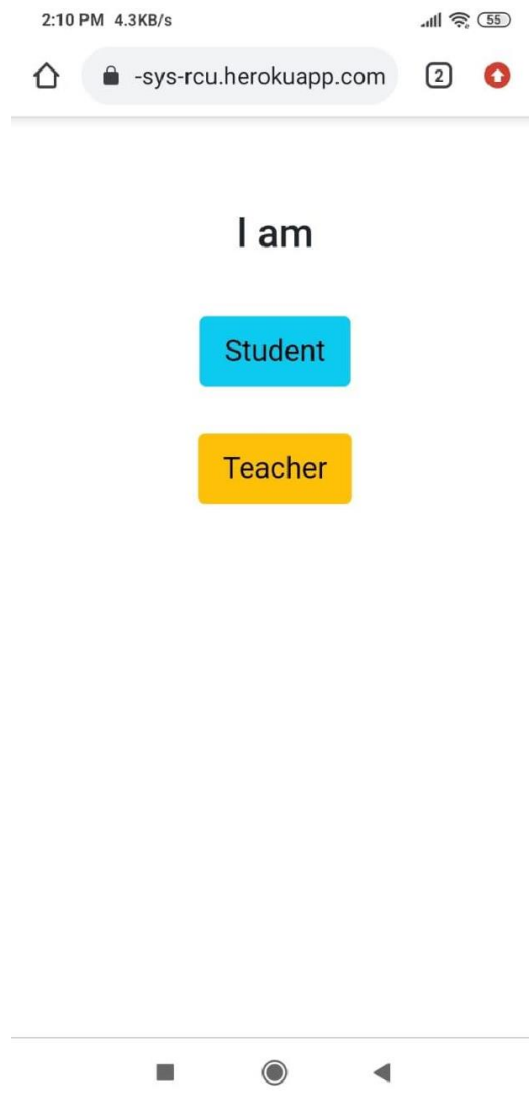
STUDENT SIGNUP PAGE:

Student Signup

Student Name

Full Name

Roll Number

Roll Number

Year of Passing

Passing Year

Department

Department

Submit   Cancel

TEACHER SIGNUP PAGE

⌂   🔒 -sys-rcu.herokuapp.com   ② 🔴

Teacher Signup

Teacher Name

Full Name

Employ Id

Employ Id

Department

Department

Submit   **Cancel**

G

TEACHER ATTENDANCE SYSTEM:

2:11 PM 0.2KB/s

54

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Hi   Logout

Attendance   Records

Make Attendance

AI   ⌄

generate

Subject :-

Date/Time :-

Hi   Logout

Attendance   Records

Make Attendance

| AI | ⌄ |

generate

Subject :- AI

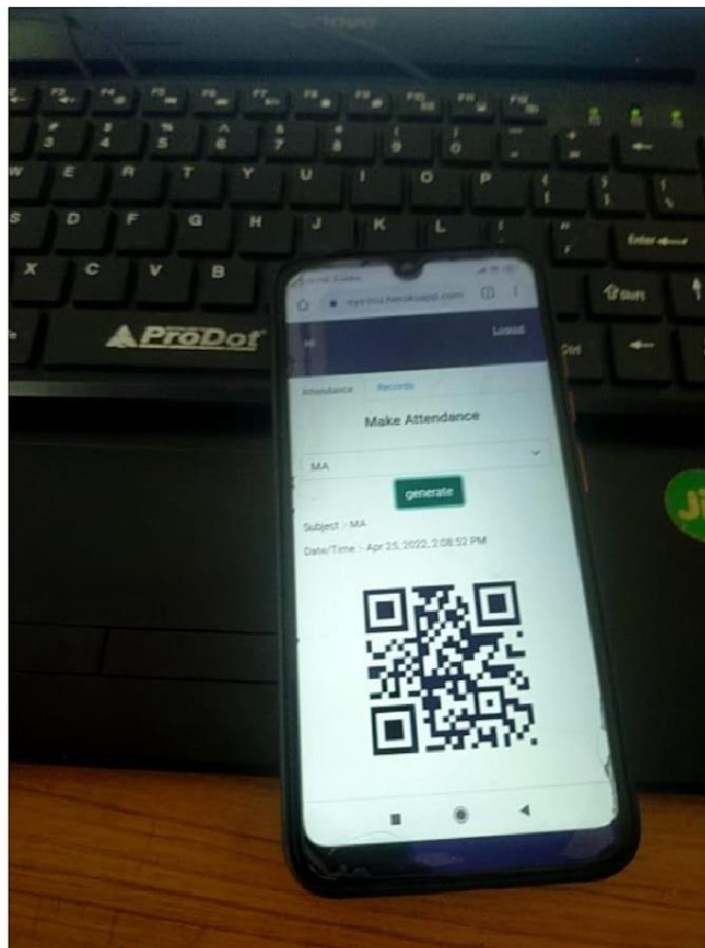Date/Time :- Apr 25, 2022, 2:08:52 PM

STUDENT ATTENDANCE PAGE:

Hi Noor

<u>Logout</u>

Attendance | Records

Make Attendance

successfully attend

Hi Noor

Logout

Attendance   Records

Date/Time	Faculty	Branch	Subject
Apr 25, 2022, 12:39:09 PM	Priyanka	ece	MA
Apr 25, 2022, 2:08:52 PM	Sonu Kumar	ece	AI