



SWE30010

# HRM PROPOSAL FOR GEMADEPT

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# Conducting Quality Control Measure

## 1. Implemented Measures

After defining the quality that our product must have for the first sprint, we performed those tasks and observe their progress via Trello, some of the evidence is also collected to determine our quality performance and progress.

We separated the testing into different groups that have similar component for ease of backtracking and review and during this period, we have tested 3 groups of tests that has been done.

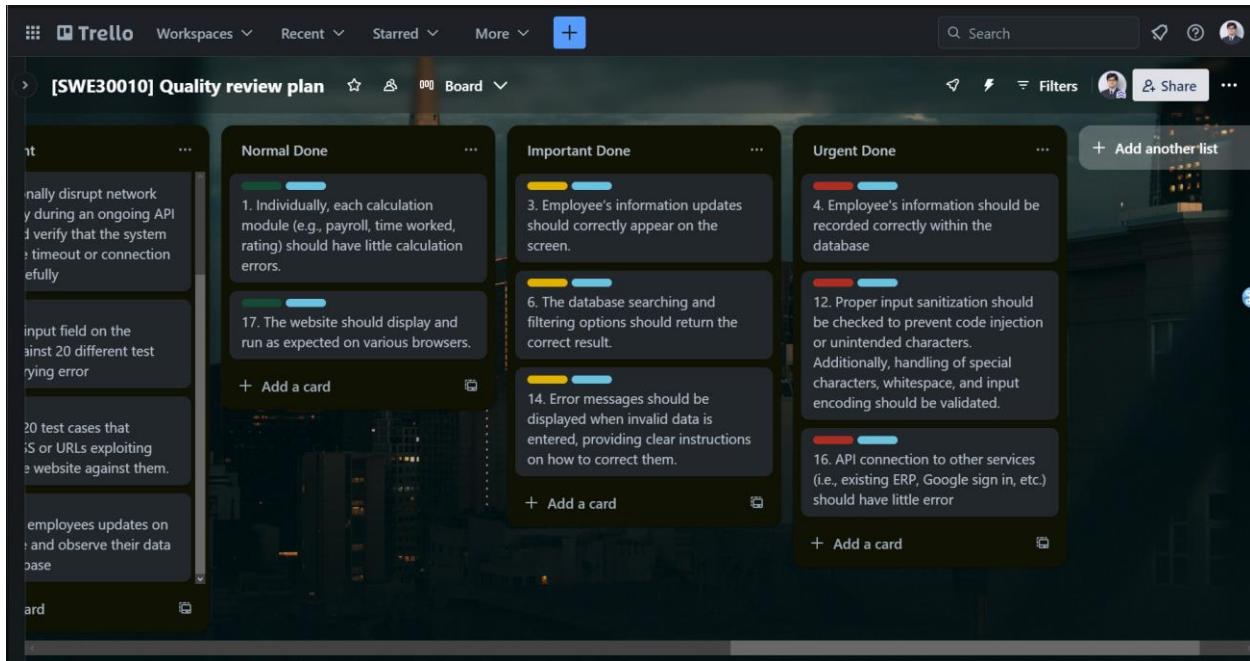


Figure 1.1: Plan for each quality

## 2. Evidence & Report

### Evidence

#### Group 1: Display and record

**Quality 1:** Individually, each calculation module (e.g., payroll, time worked, rating) should have little calculation errors.

**Testing measure:** Insert 50 rows of employees with varying degrees of different parameters to observe whether the calculation function is correctly configured.

## Original Data

The screenshot shows a Google Sheets spreadsheet with the following details:

- Title:** HR Project
- Columns:** A1 (id), B (email), C (base\_salary), D (total\_work\_hour), E (bonus), F (actual\_pay).
- Data Rows:** There are 50 rows of data, each containing an id (from 1 to 51), an email address, a base salary, a total work hour, a bonus amount, and an actual pay amount.
- Toolbar:** Standard Google Sheets toolbar with icons for file, edit, insert, etc.
- Header Bar:** Shows the title 'HR Project' and other navigation links like Chia Sẻ (Share).

A1	B	C	D	E	F
		base_salary	total_work_hour	bonus	actual_pay
1	id				
2	1	\$21,00	7:30:00	\$23,00	\$180,50
3	2	\$27,00	1896:00:00	\$79,00	\$51,271,00
4	3	\$21,00	480:00:00	\$23,00	\$10,103,00
5	4	\$23,00	7:30:00	\$20,00	\$192,50
6	5	\$30,00	12:30:00	\$10,00	\$385,00
7	6	\$23,00	28:03:00	\$0,00	\$645,15
8	7	\$23,00	11:11:00	\$30,00	\$287,22
9	8	\$27,00	24:25:00	\$50,00	\$709,25
10	9	\$23,00	26:23:00	\$50,00	\$656,82
11	10	\$25,00	29:21:00	\$20,00	\$753,75
12	11	\$24,00	17:46:00		\$426,40
13	12	\$23,00	27:49:00	\$30,00	\$669,78
14	13	\$26,00	20:44:00	\$30,00	\$569,07
15	14	\$23,00	30:56:00		\$711,47
16	15	\$27,00	10:56:00		\$295,20
17	16	\$26,00	6:33:00		\$170,30
18	17	\$26,00	23:42:00	\$20,00	\$636,20
19	18	\$29,00	11:23:00	\$70,00	\$400,12
20	19	\$23,00	8:21:00		\$192,05
21	20	\$27,00	48:08:00		\$1,299,60
22	21	\$22,00	14:53:00		\$327,43
23	22	\$27,00	0:00:00		\$0,00
24	23	\$30,00	3:50:00		\$115,00
25	24	\$21,00	0:00:00		\$0,00
26	25	\$23,00	18:46:00		\$431,63
27	26	\$26,00	23:30:00		\$611,00
28	27	\$24,00	0:00:00	\$7,00	\$7,00
29	28	\$30,00	9:05:00		\$272,50
30	29	\$23,00	11:50:00		\$272,17
31	30	\$26,00	11:42:00		\$304,20
32	31	\$29,00	12:44:00		\$369,27
33	32	\$30,00	13:39:00		\$409,50
34	33	\$29,00	9:12:00		\$266,80
35	34	\$28,00	35:23:00		\$990,73
36	35	\$25,00	6:29:00		\$162,08
37	36	\$24,00	0:00:00		\$0,00
38	37	\$23,00	35:24:00		\$814,20
39	38	\$22,00	4:56:00		\$108,53
40	39	\$24,00	17:52:00		\$428,80
41	40	\$29,00	9:16:00		\$268,73
42	41	\$26,00	2:03:00		\$53,30
43	42	\$25,00	19:53:00		\$497,08
44	43	\$30,00	34:42:00		\$1,041,00
45	44	\$26,00	13:33:00		\$352,30
46	45	\$25,00	4:09:00		\$103,75
47	46	\$30,00	4:53:00		\$146,50
48	47	\$28,00	16:33:00		\$463,40
49	48	\$24,00	0:00:00		\$0,00
50	49	\$25,00	14:27:00		\$361,25
51	50	\$24,00	19:53:00		\$477,20
52	51	\$21,00	13:23:00		\$281,05

Figure 2.1, 2.2, 2.3: 50 Original Rows

## After testing

The screenshot shows a Google Sheets document with the title "HR Project". The spreadsheet contains 50 rows of data, each representing an employee. The columns are labeled A through L. Column A contains the row number (1 to 50), column B contains the employee's ID and email address, column C contains the base salary, column D contains the total work hour, column E contains the bonus, and column F contains the actual pay. The data is presented in a clean, tabular format with horizontal and vertical grid lines.

L55	A	B	C	D	E	F	G	H	I	J	K	L
1	id	email	base_salary	total_work_hour	bonus	actual_pay						
2	1	mloyns0@is.gd	\$21,00	7:30:00	\$128,00	\$285,50						
3	2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$41,00	\$51,233,00						
4	3	scannop2@who.int	\$21,00	480:00:00	\$93,00	\$10,173,00						
5	4	inoni3@businesswire.com	\$23,00	7:30:00	\$12,00	\$184,50						
6	5	bsimmers4@gizmodo.com	\$30,00	12:30:00	\$77,00	\$452,00						
7	6	nhandman5@amazon.com	\$23,00	28:03:00	\$135,00	\$780,15						
8	7	hdreger0@unc.edu	\$23,00	11:11:00	\$3,00	\$260,22						
9	8	meverson7@reference.com	\$27,00	24:25:00	\$109,00	\$768,25						
10	9	bgotecliffe8@webs.com	\$23,00	26:23:00	\$56,00	\$662,82						
11	10	babramson9@icq.com	\$25,00	29:21:00	\$72,00	\$805,75						
12	11	jwylea@google.ru	\$24,00	17:46:00	\$24,00	\$450,40						
13	12	kwhewillb@wired.com	\$23,00	27:49:00	\$147,00	\$786,78						
14	13	mfraryc@elegantthemes.com	\$26,00	20:44:00	\$8,00	\$547,07						
15	14	wcannawayd@wired.com	\$23,00	30:56:00	\$63,00	\$774,47						
16	15	gdytee@usatoday.com	\$27,00	10:56:00	\$101,00	\$396,20						
17	16	flinehamf@ed.gov	\$26,00	6:33:00	\$40,00	\$210,30						
18	17	lsimong@baidu.com	\$26,00	23:42:00	\$86,00	\$702,20						
19	18	sfairyh@cnet.com	\$29,00	11:23:00	\$132,00	\$462,12						
20	19	lvlahosj@pen.io	\$23,00	8:21:00	\$19,00	\$211,05						
21	20	ngoodsallj@tiny.cc	\$27,00	48:08:00	\$69,00	\$1,368,60						
22	21	lrenk@weibo.com	\$22,00	14:53:00	\$113,00	\$327,43						
23	22	rhawkswoodl@paginalette.it	\$27,00	0:00:00	\$9,00	\$9,00						
24	23	wwalickim@spotify.com	\$30,00	3:50:00	\$129,00	\$244,00						
25	24	aplenderleithn@unesco.org	\$21,00	0:00:00	\$33,00	\$33,00						
26	25	spoolo@buzzfeed.com	\$23,00	18:46:00	\$121,00	\$552,63						
27	26	pbayfieldp@blogger.com	\$26,00	23:30:00	\$67,00	\$678,00						
28	27	aleyzellg@senate.gov	\$24,00	0:00:00	\$45,00	\$45,00						
29	28	hpaitonr@xrea.com	\$30,00	9:05:00	\$104,00	\$376,50						
30	29	dstennets@cmonitor.com	\$23,00	11:50:00	\$17,00	\$289,17						
31	30	smcglynnnt@lulu.com	\$26,00	11:42:00	\$81,00	\$385,20						
32	31	kmcarthuru@discuz.net	\$29,00	12:44:00	\$139,00	\$508,27						
33	32	rstandingfordy@bing.com	\$30,00	13:39:00	\$23,00	\$432,50						
34	33	tkunnekew@umn.edu	\$29,00	9:12:00	\$73,00	\$339,80						
35	34	qiannuzzix@webnode.com	\$28,00	35:23:00	\$111,00	\$1,101,73						
36	35	tconachyy@stanford.edu	\$25,00	6:29:00	\$58,00	\$220,08						
37	36	tsaggersz@hc360.com	\$24,00	0:00:00	\$92,00	\$92,00						
38	37	anorthcote10@dell.com	\$23,00	35:24:00	\$36,00	\$850,20						
39	38	rantonias11@nymag.com	\$22,00	4:56:00	\$125,00	\$233,53						
40	39	kswyersexy12@t.co	\$24,00	17:52:00	\$52,00	\$480,80						
41	40	cgoodright13@bing.com	\$29,00	9:16:00	\$76,00	\$344,73						
42	41	rfawdry14@ibm.com	\$26,00	2:03:00	\$142,00	\$195,30						
43	42	lrays15@vk.com	\$25,00	19:53:00	\$29,00	\$526,08						
44	43	jmorten16@hp.com	\$30,00	34:42:00	\$97,00	\$1,138,00						
45	44	kralling17@hugedomains.com	\$26,00	13:33:00	\$48,00	\$400,30						
46	45	pmerriman18@ucsd.edu	\$25,00	4:09:00	\$114,00	\$217,75						
47	46	acorton19@cnet.com	\$30,00	4:53:00	\$61,00	\$207,50						
48	47	plidgerwood1a@nymag.com	\$28,00	16:33:00	\$84,00	\$547,40						
49	48	ppanyer1b@tuttocitta.it	\$24,00	0:00:00	\$137,00	\$137,00						
50	49	dsimmen1c@gnu.org	\$25,00	14:27:00	\$6,00	\$367,25						
51	50	smckeever1d@example.com	\$24,00	19:53:00	\$103,00	\$580,20						

Figure 2.1, 2.2, 2.3: 50 Post-tested Rows

We employed our database as our calculation module as well, we used the following formula to calculate our employee's pay:

$$=(((LEFT(D2 ; FIND(":"; D2) - 1))+(MINUTE(D2)/60))*C2)+E2$$

After testing, all the rows have been calculated correctly and this quality passed our defined threshold.

## Quality 3: Employee's information updates should correctly appear on the screen.

**Testing measure:** Verify the displayed information on the website against the database.

Employee Information   Payroll Management   Overall Tracking						
Search employee by Name						
ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyots@nigd.gov	\$21.00	7.30:00	\$120.00	\$285.50	Suspending
2	cstoneham1@zimbi.com	\$27.00	1896.00:00	\$41.00	\$51,233.00	Suspending
3	scannop2@who.int	\$21.00	480.00:00	\$93.00	\$10,173.00	Suspending
4	inoni3@businesswire.com	\$23.00	7.30:00	\$12.00	\$184.50	Suspending
5	bsimmer4@j2mndo.com	\$30.00	12.30:00	\$77.00	\$452.00	Suspending
6	nhandman5@amazon.com	\$23.00	28.03:00	\$135.00	\$780.15	Suspending
7	hdreger6@unc.edu	\$23.00	11.11:00	\$3.00	\$260.22	Suspending
8	meversen7@reference.com	\$27.00	24.25:00	\$109.00	\$768.25	Suspending
9	bgotcliffe8@webs.com	\$23.00	26.23:00	\$56.00	\$662.82	Suspending
10	babramson9@icq.com	\$25.00	29.21:00	\$72.00	\$805.75	Suspending
11	jvylies@google.ru	\$24.00	17.46:00	\$24.00	\$450.40	Suspending
12	kwhewillb@wired.com	\$23.00	27.49:00	\$147.00	\$786.78	Suspending
13	mrfracyc@elegantthemes.com	\$26.00	20.44:00	\$8.00	\$547.07	Suspending
14	wcannawayd@wired.com	\$23.00	30.56:00	\$63.00	\$774.47	Suspending
15	gdytee@usatoday.com	\$27.00	10.56:00	\$101.00	\$396.20	Suspending
16	finehamf@ed.gov	\$26.00	6.33:00	\$40.00	\$210.30	Suspending
17	lsimong@aidu.com	\$26.00	23.42:00	\$86.00	\$702.20	Suspending
18	sfairyh@cnet.com	\$29.00	11.23:00	\$132.00	\$462.12	Suspending
19	Mahost@pen.io	\$23.00	8.21:00	\$19.00	\$211.05	Suspending
20	ngoodalls@tiny.cc	\$27.00	48.08:00	\$69.00	\$1,368.60	Suspending
21	Irenk@weibo.com	\$22.00	14.53:00	\$113.00	\$327.43	Suspending
22	rhawkwood1@paginegialle.it	\$27.00	0.00:00	\$9.00	\$9.00	Suspending
23	wwalicikm@spotify.com	\$30.00	3.50:00	\$129.00	\$244.00	Suspending
24	aplenderleithn@unesco.org	\$21.00	0.00:00	\$33.00	\$33.00	Suspending
25	spoolo@buzzfeed.com	\$23.00	18.46:00	\$121.00	\$552.63	Suspending
26	pbayfieldp@blogger.com	\$26.00	23.30:00	\$67.00	\$678.00	Suspending
27	aleyzello@senate.gov	\$24.00	0.00:00	\$45.00	\$45.00	Suspending
28	hpaitonr@xrea.com	\$30.00	9.05:00	\$104.00	\$376.50	Suspending
29	dstennets@csmonitor.com	\$23.00	11.50:00	\$17.00	\$289.17	Suspending
30	smcglynn@lulu.com	\$26.00	11.42:00	\$81.00	\$385.20	Suspending
31	kmcarthuru@discuz.net	\$29.00	12.44:00	\$139.00	\$508.27	Suspending
32	rstandingfordv@bing.com	\$30.00	13.39:00	\$23.00	\$432.50	Suspending
33	tkunnekew@umn.edu	\$29.00	9.12:00	\$73.00	\$339.80	Suspending
34	qianhuzzi@webnode.com	\$28.00	35.23:00	\$111.00	\$1,101.73	Suspending
35	tconachry@stanford.edu	\$25.00	6.29:00	\$58.00	\$220.08	Suspending
36	tsaggerz@hc360.com	\$24.00	0.00:00	\$92.00	\$92.00	Suspending
37	anorthote10@dell.com	\$23.00	35.24:00	\$36.00	\$850.20	Suspending
38	rantonias11@nymag.com	\$22.00	4.56:00	\$125.00	\$233.53	Suspending
39	kswyversexy12@t.co	\$24.00	17.52:00	\$52.00	\$480.80	Suspending
40	cgoodright13@bing.com	\$29.00	9.16:00	\$76.00	\$344.73	Suspending
41	rfawdry14@ibm.com	\$26.00	2.03:00	\$142.00	\$195.30	Suspending
42	lrays15@vk.com	\$25.00	19.53:00	\$29.00	\$526.08	Suspending
43	jmorten16@hp.com	\$30.00	34.42:00	\$97.00	\$1,138.00	Suspending
44	krolling17@hugedomains.com	\$26.00	13.33:00	\$48.00	\$400.30	Suspending
45	pmerriment18@ucsd.edu	\$25.00	4.09:00	\$114.00	\$217.75	Suspending
46	acorton19@cnet.com	\$30.00	4.53:00	\$61.00	\$207.50	Suspending
47	plidgerwood1a@nymag.com	\$28.00	16.33:00	\$84.00	\$547.40	Suspending
48	ppanyer1b@tuttocitta.it	\$24.00	0.00:00	\$137.00	\$137.00	Suspending
49	dsimmgenc@gnu.org	\$25.00	14.27:00	\$6.00	\$367.25	Suspending
50	smckeevert1d@example.com	\$24.00	19.53:00	\$103.00	\$580.20	Suspending

Figure 2.4, 2.5, 2.6: Displaying of payroll on website

With the database's pay calculated, we can take a look at the website to see how it displayed the data, and as can be seen, all the 50 rows have been updated correctly.

Employees' information has also been correctly displayed in the employee's management tab:

A1	A	B	C	D	E	F	G	H	I	J
1	<b>id</b>	<b>first_name</b>	<b>last_name</b>	<b>email</b>	<b>gender</b>	<b>phone</b>	<b>address</b>	<b>department</b>	<b>position</b>	
2	1	Dr	Loyns	mlloyns0@is.gd	Male	485-990-3342	260 Fulton Trail	Support	Senior Financial Analyst	
3	2	Ms	Stoneham	cstoneham1@zimbio.com	Female	873-386-1381	61188 Cambridge Crossing	Human Resources	Mechanical Systems Engineer	
4	3	Ms	Cannop	scannop2@who.int	Female	957-805-7791	167 Emmet Alley	Human Resources	Analog Circuit Design manager	
5	4	Dr	Noni	inon3@businesswire.com	Male	842-922-2795	3342 Petterle Avenue	Marketing	Biostatistician III	
6	5	Mrs	Simmers	bsimmers4@gizmodo.com	Male	437-233-7823	6 Fremont Point	Training	Accountant I	
7	6	Honorable	Handman	nhandman5@amazon.com	Female	225-771-4775	511 American Ash Hill	Services	Nurse Practitioner	
8	7	Ms	Dreger	hdreger6@unc.edu	Male	675-254-5559	49830 Pennsylvania Terrace	Product Management	Senior Sales Associate	
9	8	Ms	Everson	meverson7@reference.com	Male	635-948-9337	1 Lighthouse Bay Road	Sales	Assistant Professor	

Figure 2.7: Employee's information in Database

Employee Information		Payroll Management		Overall Tracking	
<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Dr Loyns</b> Senior Financial Analyst</p> <p>Address: 260 Fulton Trail Phone: 485-990-3342 Email: mlloyns0@is.gd</p> <p><a href="#">View Profile</a></p> </div> <div style="width: 33%;"> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Ms Stoneham</b> Mechanical Systems Engineer</p> <p>Address: 61188 Cambridge Crossing Phone: 873-386-1381 Email: cstoneham1@zimbio.com</p> <p><a href="#">View Profile</a></p> </div> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Ms Cannop</b> Analog Circuit Design manager</p> <p>Address: 167 Emmet Alley Phone: 957-805-7791 Email: scannop2@who.int</p> <p><a href="#">View Profile</a></p> </div> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Dr Noni</b> Biostatistician III</p> <p>Address: 3342 Petterle Avenue Phone: 842-922-2795 Email: inon3@businesswire.com</p> <p><a href="#">View Profile</a></p> </div> </div> <div style="width: 33%;"> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Mrs Simmers</b> Accountant I</p> <p>Address: 6 Fremont Point Phone: 437-233-7823 Email: bsimmers4@gizmodo.com</p> <p><a href="#">View Profile</a></p> </div> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Honorable Handman</b> Nurse Practitioner</p> <p>Address: 511 American Ash Hill Phone: 225-771-4775 Email: nhandman5@amazon.com</p> <p><a href="#">View Profile</a></p> </div> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Ms Dreger</b> Senior Sales Associate</p> <p>Address: 49830 Pennsylvania Terrace Phone: 675-254-5559 Email: hdreger6@unc.edu</p> <p><a href="#">View Profile</a></p> </div> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;">  <p><b>Ms Everson</b> Assistant Professor</p> <p>Address: 1 Lighthouse Bay Road Phone: 635-948-9337 Email: meverson7@reference.com</p> <p><a href="#">View Profile</a></p> </div> </div> </div> </div>					
<p>Showing 0 to 8 of 305 results</p> <div style="text-align: right; margin-top: -10px;"> <span>1</span> <span>2</span> <span>3</span> <span>...</span> <span>39</span> <span>&gt;</span> </div>					

Figure 2.8: Employee's information on Website

With the website displaying the correct information within the database, this quality passed our benchmark.

**Quality 4:** Employee's information should be recorded correctly within the database.

**Testing measure:** Make 20 employees updates on the website and observe their data in the database.

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21.00	7:30:00	\$128.00	\$285.50	Suspending
2	cstoneham1@zimbio.com	\$27.00	1896:00:00	\$41.00	\$51.233.00	Suspending
3	scannop2@vho.int	\$21.00	480:00:00	\$93.00	\$10.173.00	Suspending
4	inom3@businesswire.com	\$23.00	7:30:00	\$12.00	\$184.50	Suspending
5	bimmers4@glzmoto.com	\$30.00	12:30:00	\$77.00	\$452.00	Suspending
6	rhandman5@amazon.com	\$23.00	28:03:00	\$135.00	\$780.15	Suspending
7	hdreger6@unc.edu	\$23.00	11:11:00	\$3.00	\$290.22	Suspending
8	meversen7@reference.com	\$27.00	24:25:00	\$109.00	\$768.25	Suspending
9	bgotechlife8@webs.com	\$23.00	26:23:00	\$56.00	\$662.82	Suspending
10	babramson9@icq.com	\$25.00	29:21:00	\$72.00	\$805.75	Suspending
11	jvyleea@google.ru	\$24.00	17:46:00	\$24.00	\$450.40	Suspending
12	kvhewillb@wired.com	\$23.00	27:49:00	\$147.00	\$786.78	Suspending
13	mfarayc@elegantthemes.com	\$26.00	20:44:00	\$8.00	\$547.07	Suspending
14	wcamawayd@wired.com	\$23.00	30:56:00	\$63.00	\$774.47	Suspending
15	gdytee@usatoday.com	\$27.00	10:56:00	\$101.00	\$396.20	Suspending
16	finehamt@ed.gov	\$26.00	6:33:00	\$40.00	\$210.30	Suspending
17	lsimong@baidu.com	\$26.00	23:42:00	\$86.00	\$702.20	Suspending
18	sfainyh@cnet.com	\$29.00	11:23:00	\$132.00	\$462.12	Suspending
19	lvlahosi@pen.io	\$23.00	8:21:00	\$19.00	\$211.05	Suspending
20	ngoodstall@tiny.cc	\$27.00	48:08:00	\$69.00	\$1.368.80	Suspending

Figure 2.9: First 20 employees

Enter bonus amount  
  
Submit
Cancel

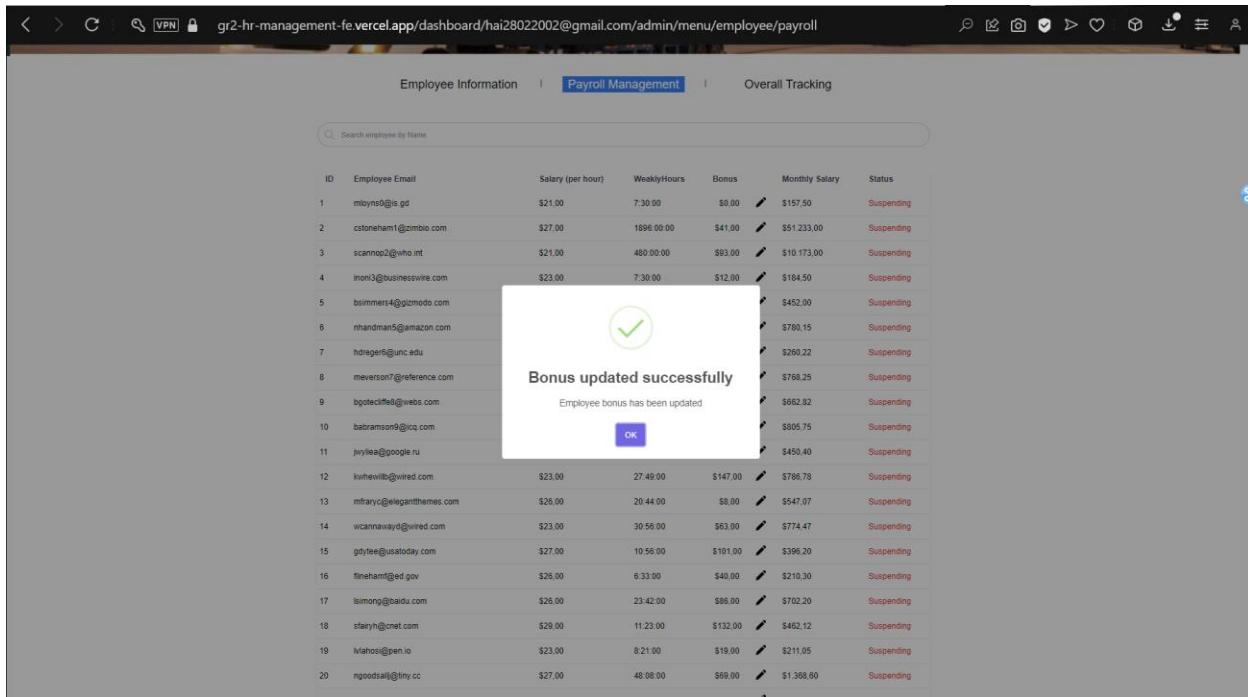
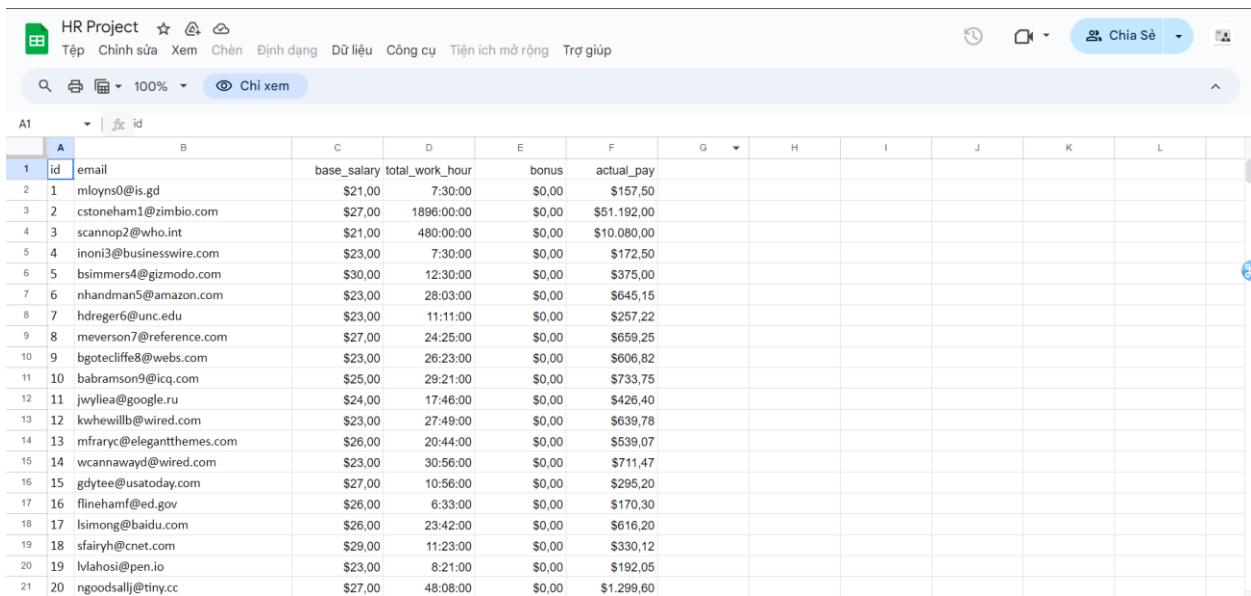


Figure 2.10, 2.11: Update, Confirmation Prompt and Amount

This screenshot shows the same payroll management application after the update. The table of employees now reflects the changes made in the previous screenshot. For example, the employee with ID 12 now has a salary of \$23.00 and weekly hours of 27:49:00, resulting in a monthly salary of \$786.78. The status for all employees is now listed as "Suspending". The "OK" button from the confirmation dialog is no longer visible.

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns@zis.gd	\$21.00	7:30:00	\$0.00	\$157.50	Suspending
2	cstoneham1@zimbio.com	\$27.00	1896.00:00	\$0.00	\$51,192.00	Suspending
3	scannop2@who.int	\$21.00	480.00:00	\$0.00	\$10,080.00	Suspending
4	inon3@businesswire.com	\$23.00	7:30:00	\$0.00	\$172.50	Suspending
5	bsimmers4@gizmodo.com	\$30.00	12:30:00	\$0.00	\$375.00	Suspending
6	rhandman5@amazon.com	\$23.00	28:03:00	\$0.00	\$545.15	Suspending
7	hdreger6@unc.edu	\$23.00	11:11:00	\$0.00	\$527.22	Suspending
8	meverson7@reference.com	\$27.00	24:25:00	\$0.00	\$659.25	Suspending
9	bgotedtelle8@webs.com	\$23.00	26:23:00	\$0.00	\$606.82	Suspending
10	babramson9@iqic.com	\$25.00	29:21:00	\$0.00	\$733.75	Suspending
11	jwylea@google.ru	\$24.00	17:48:00	\$0.00	\$426.40	Suspending
12	kuhewilb@wired.com	\$23.00	27:49:00	\$0.00	\$786.78	Suspending
13	mfrary.c@elegantthemes.com	\$26.00	20:44:00	\$8.00	\$539.07	Suspending
14	wicannawayd@wired.com	\$23.00	30:56:00	\$0.00	\$711.47	Suspending
15	gdylee@usatoday.com	\$27.00	10:56:00	\$0.00	\$395.20	Suspending
16	flinemam7@ed.gov	\$26.00	6:33:00	\$0.00	\$178.30	Suspending
17	lismomo@baidu.com	\$26.00	23:42:00	\$0.00	\$616.20	Suspending
18	sfarray@cnet.com	\$29.00	11:23:00	\$0.00	\$336.12	Suspending
19	lvlahosi@open.io	\$23.00	8:21:00	\$0.00	\$192.05	Suspending
20	ngoodall@tiny.cc	\$27.00	48:08:00	\$69.00	\$1,299.60	Suspending

Figure 2.12: After update on Website



A screenshot of a Microsoft Excel spreadsheet titled "HR Project". The spreadsheet contains data for 21 employees, with columns for ID, email, base salary, total work hour, bonus, and actual pay. The data is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>A</b>	<b>email</b>		<b>base_salary</b>	<b>total_work_hour</b>	<b>bonus</b>	<b>actual_pay</b>					
2	1	mloyns0@is.gd	\$21,00	7:30:00	\$0,00	\$157,50						
3	2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$0,00	\$51,192,00						
4	3	scannop2@who.int	\$21,00	480:00:00	\$0,00	\$10,080,00						
5	4	inoni3@businesswire.com	\$23,00	7:30:00	\$0,00	\$172,50						
6	5	bsimmers4@gizmodo.com	\$30,00	12:30:00	\$0,00	\$375,00						
7	6	nhandman5@amazon.com	\$23,00	28:03:00	\$0,00	\$645,15						
8	7	hdreger0@unc.edu	\$23,00	11:11:00	\$0,00	\$257,22						
9	8	meverson7@reference.com	\$27,00	24:25:00	\$0,00	\$659,25						
10	9	bgotecliffe8@webs.com	\$23,00	26:23:00	\$0,00	\$606,82						
11	10	babramson9@icq.com	\$25,00	29:21:00	\$0,00	\$733,75						
12	11	jwyliea@google.ru	\$24,00	17:46:00	\$0,00	\$426,40						
13	12	kwhewillb@wired.com	\$23,00	27:49:00	\$0,00	\$639,78						
14	13	mfraryc@elegantthemes.com	\$26,00	20:44:00	\$0,00	\$539,07						
15	14	wcannawayd@wired.com	\$23,00	30:56:00	\$0,00	\$711,47						
16	15	gdytee@usatoday.com	\$27,00	10:56:00	\$0,00	\$295,20						
17	16	flinehamf@ed.gov	\$26,00	6:33:00	\$0,00	\$170,30						
18	17	lsimong@baidu.com	\$26,00	23:42:00	\$0,00	\$616,20						
19	18	sfairyh@cnet.com	\$29,00	11:23:00	\$0,00	\$330,12						
20	19	lvlahosi@pen.io	\$23,00	8:21:00	\$0,00	\$192,05						
21	20	ngoodsallj@tiny.cc	\$27,00	48:08:00	\$0,00	\$1,299,60						

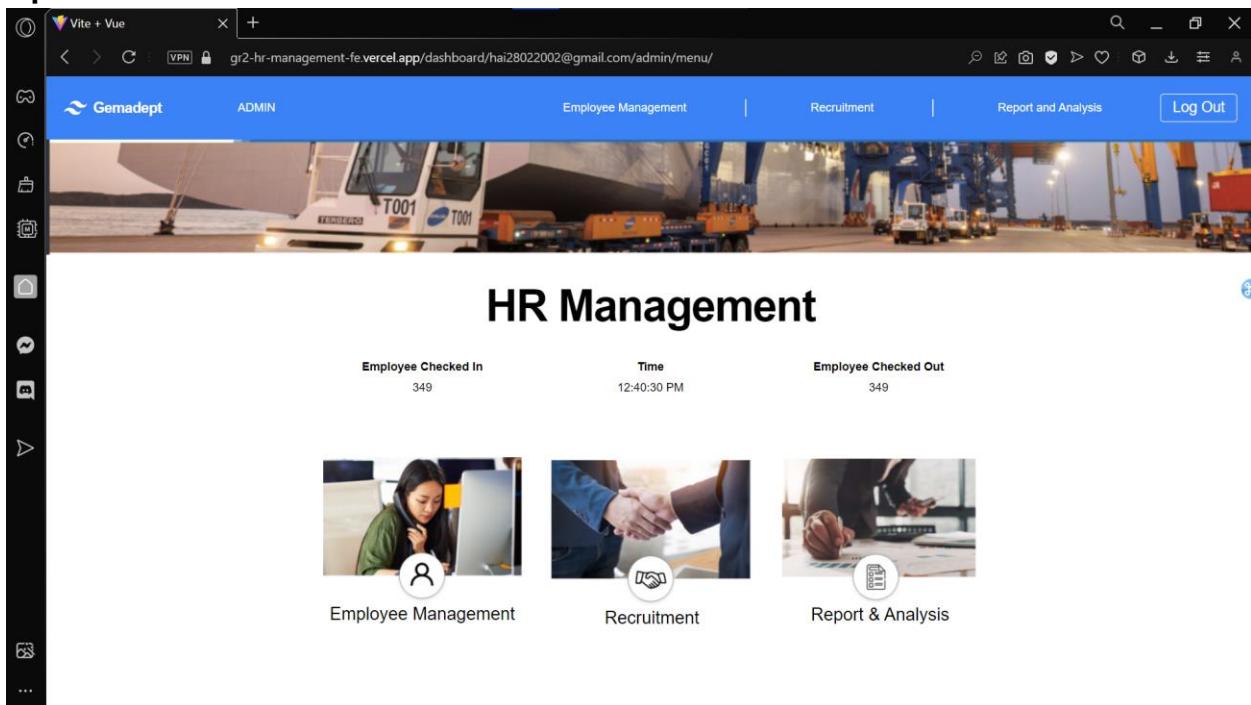
Figure 2.13: Information in Database

The information written on the website matches that of the database, hence, the accuracy is correct, and this quality passed our benchmark.

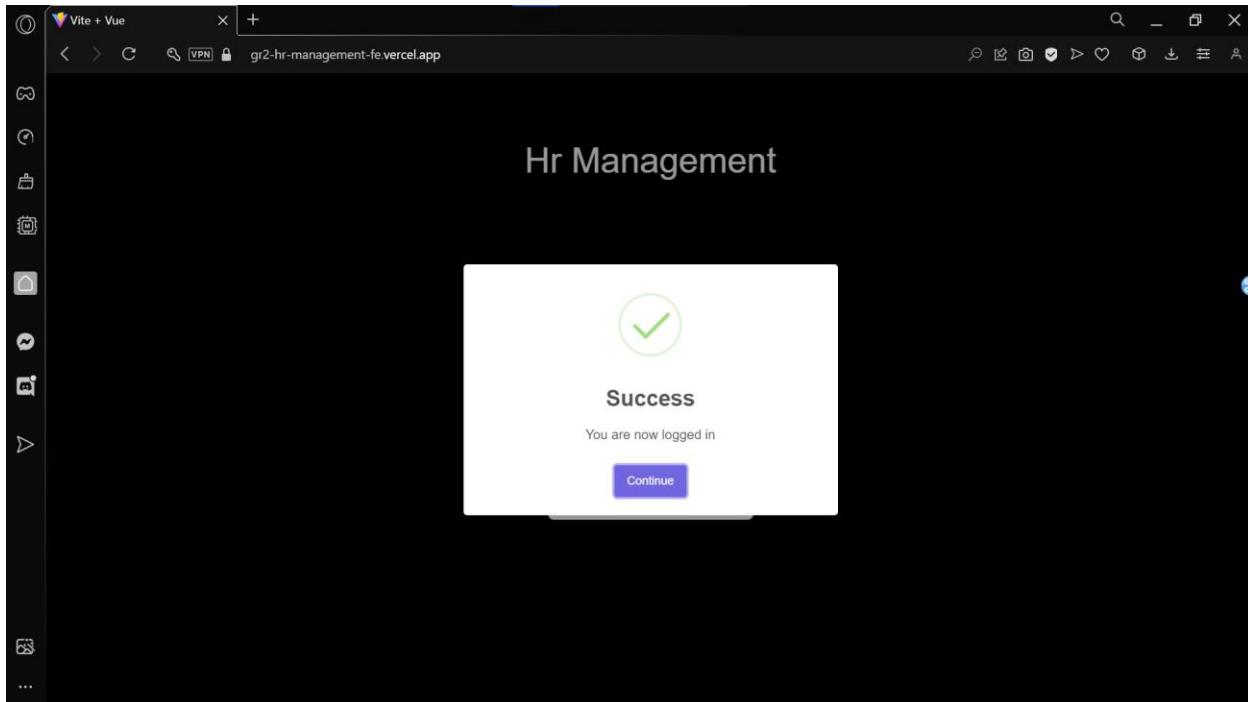
**Quality 17:** The website should display and run as expected on various browsers.

**Testing measure:** Run the HRM website on Opera, Chrome, Coc Coc, Firefox, Brave, and Edge, and note any differences or issues.

### Opera:



A screenshot of the HR Management website as viewed in the Opera browser. The page features a blue header with the logo "Gemadept" and the word "ADMIN". It includes navigation links for "Employee Management", "Recruitment", and "Report and Analysis", along with a "Log Out" button. Below the header is a large image of a port with several large ships and industrial equipment. The main content area is titled "HR Management" and displays three sections: "Employee Checked In" (349), "Time" (12:40:30 PM), and "Employee Checked Out" (349). At the bottom, there are three cards with icons and text: "Employee Management" (image of a person at a computer), "Recruitment" (image of two people shaking hands), and "Report & Analysis" (image of a person working at a desk with documents).



A screenshot of a web application dashboard titled "Employee Management". The top navigation bar includes "Gemadepot", "ADMIN", "Employee Management", "Recruitment", "Report and Analysis", and "Log Out". Below the navigation is a banner image of industrial equipment at night. The main content area features three tabs: "Employee Information" (selected), "Payroll Management", and "Overall Tracking". A search bar at the top says "Search employee by Name". Below the tabs, there are four employee profiles in cards:

Dr Loyns

Senior Financial Analyst

Address 260 Fulton Trail

Phone 485-990-3342

Email mloyns0@is.gd

[View Profile](#)

Ms Stoneham

Mechanical Systems Engineer

Address 67188 Cambridge Crossing

Phone 873-386-1381

Email cstoneham1@zimbio.com

[View Profile](#)

Ms Cannop

Analog Circuit Design manager

Address 167 Emmet Alley

Phone 957-805-7791

Email scannop2@who.int

[View Profile](#)

Dr Noni

Biostatistician III

Address 3342 Petterle Avenue

Phone 842-922-2795

Email inon3@businesswire.com

[View Profile](#)

Figure 2.14 – 2.17: Website on Opera Browser

## Google Chrome

Hr Management

Success

You are now logged in

Continue

The screenshot shows the Gemadept HR Management dashboard. At the top, there's a navigation bar with links for 'Employee Management', 'Recruitment', 'Report and Analysis', and 'Log Out'. Below the navigation is a banner image of a ship being loaded onto a truck. The main title 'HR Management' is displayed prominently. Underneath, there's a section for 'Employee Checked In' showing a count of 349, and another for 'Employee Checked Out' also showing 349. Below these sections are three small images: a woman working at a computer, two people shaking hands, and a person writing on a document.

Employee Checked In

349

Time

12:42:05 PM

Employee Checked Out

349

The screenshot shows the 'Employee Information' section of the HR Management dashboard. It features a search bar at the top labeled 'Search employee by Name'. Below the search bar are four employee profiles, each with a placeholder profile picture and a 'View Profile' button. The profiles are as follows:

Employee Name	Title	Address	Phone	Email
Dr Loyns	Senior Financial Analyst	260 Fulton Trail	485-990-3342	mloyns0@ls.gd
Ms Stoneham	Mechanical Systems Engineer	61188 Cambridge Crossing	873-386-1381	cstoneham1@zimbio.com
Ms Cannop	Analog Circuit Design manager	167 Emmet Alley	957-805-7791	scannop2@who.int
Dr Noni	Biostatistician III	3342 Petterie Avenue	842-922-2795	inoni3@businesswire.com

The screenshot shows a web browser window with a blue header bar. The header contains the text "Vite + Vue" and the URL "gr2-hr-management-fe.vercel.app/dashboard/hai28022002@gmail.com/admin/menu/employee/payroll". The header also includes standard browser controls like back, forward, and search, along with a "Paused" button and a three-dot menu.

The main navigation bar below the header has four items: "ADMIN", "Employee Management", "Recruitment", "Report and Analysis", and "Log Out".

A large banner image of a ship being loaded or unloaded at a port is displayed above the main content area.

The main content area features three tabs: "Employee Information", "Payroll Management" (which is currently selected and highlighted in blue), and "Overall Tracking".

Below the tabs is a search bar with the placeholder text "Search employee by Name".

A table lists employee information:

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21,00	7:30:00	\$0,00	\$157,50	Suspending
2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$0,00	\$51.192,00	Suspending
3	scannop2@who.int	\$21,00	480:00:00	\$0,00	\$10.080,00	Suspending
4	inoni3@businesswire.com	\$23,00	7:30:00	\$0,00	\$172,50	Suspending

Figure 2.18 – 2.21: Website on Google Chrome

Coc Coc:

The screenshot shows a mobile application interface with a dark theme. At the top, there is a navigation bar with icons for AI, Date, and a plus sign, followed by a three-dot menu.

The main title "Hr Management" is centered at the top of the screen.

A central modal dialog box is displayed, featuring a green checkmark icon inside a circle, the word "Success", and the message "You are now logged in". A "Continue" button is located at the bottom of the modal.

coc coc Vite + Vue

gr2-hr-management-fe.vercel.app/dashboard/hai28022002@gmail.com/admin/menu

Gemadepot ADMIN Employee Management Recruitment Report and Analysis Log Out

# HR Management

Employee Checked In: 349 Time: 12:43:42 Employee Checked Out: 349

Employee Management Recruitment Report & Analysis

coc coc Vite + Vue

gr2-hr-management-fe.vercel.app/dashboard/hai28022002@gmail.com/admin/menu/employee/data

Gemadepot ADMIN Employee Management Recruitment Report and Analysis Log Out

Employee Information | Payroll Management | Overall Tracking

Search employee by Name

Add User

Employee	Title	Address	Phone	Email
Dr Loyns	Senior Financial Analyst	260 Fulton Trail	485-990-3342	mloyns@gs.gd
Ms Stoneham	Mechanical Systems Engineer	61188 Cambridge Crossing	873-386-1381	cstoneham@zmbio.com
Ms Cannop	Analyst Circuit Design manager	167 Emmet Alley	957-805-7791	scannop2@who.int
Dr Noni	Biostatistician III	3342 Potterie Avenue	842-922-2795	inoni@businesswire.com

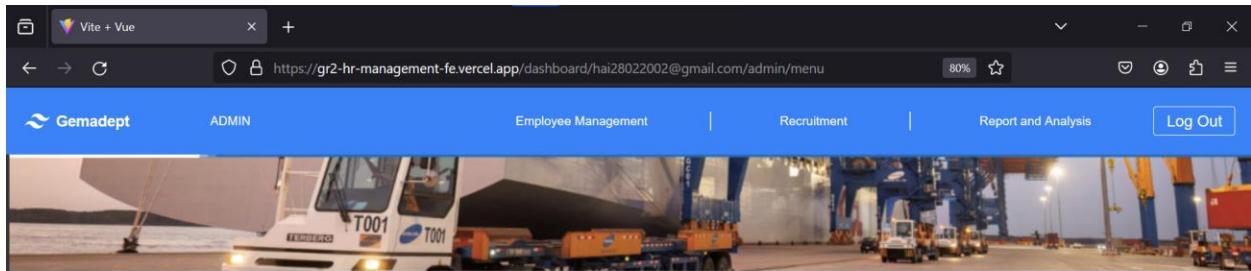
The screenshot shows a web application interface for 'Employee Management'. At the top, there's a navigation bar with 'Gernadepot' (ADMIN), 'Employee Management', 'Recruitment', 'Report and Analysis', and 'Log Out'. Below the navigation is a banner image of a port with several large cranes and shipping containers. The main content area has tabs for 'Employee Information', 'Payroll Management' (which is selected and highlighted in blue), and 'Overall Tracking'. A search bar at the top of this section says 'Search employee by Name'. Below the search bar is a table with the following data:

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21,00	7:30:00	\$0,00	\$157,50	Suspending
2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$0,00	\$51.192,00	Suspending
3	scannop2@who.int	\$21,00	480:00:00	\$0,00	\$10.080,00	Suspending
4	inon13@businesswire.com	\$23,00	7:30:00	\$0,00	\$172,50	Suspending
5	bsimmers4@gizmodo.com	\$30,00	12:30:00	\$0,00	\$375,00	Suspending
6	nhandman5@amazon.com	\$23,00	28:03:00	\$0,00	\$645,15	Suspending
7	hdreger6@unc.edu	\$23,00	11:11:00	\$0,00	\$257,22	Suspending

Figure 2.22 – 2.25: Website on Google Chrome

### Firefox:

The screenshot shows the same website on Firefox. The browser's address bar indicates the URL is <https://gr2-hr-management-fe.vercel.app>. The main content area displays a success message: 'Hr Management' at the top, followed by a large green checkmark icon inside a circle, the word 'Success' in bold, and the text 'You are now logged in' below it. A purple 'Continue' button is at the bottom of the message box.



## HR Management

Employee Checked In  
349

Time  
1:00:49 PM

Employee Checked Out  
349



Employee Management



Recruitment



Report & Analysis

A screenshot of the "Employee Management" section of the dashboard. The top navigation bar is identical to the main dashboard. Below it is a banner image of a ship being loaded. The main content area features three tabs: "Employee Information" (selected), "Payroll Management", and "Overall Tracking". A search bar labeled "Search employee by Name" is present. Below the tabs, four employee profiles are listed in a grid:

- Dr Loyns**  
Senior Financial Analyst  
Address: 260 Fulton Trail  
Phone: 485-990-3342
- Ms Stoneham**  
Mechanical Systems Engineer  
Address: 61188 Cambridge Crossing  
Phone: 873-386-1381
- Ms Cannop**  
Analog Circuit Design manager  
Address: 167 Emmet Alley  
Phone: 957-805-7791
- Dr Noni**  
Biostatistician III  
Address: 3342 Petterle Avenue  
Phone: 842-922-2795

A "Add User" button is located in the bottom right corner of the profile grid.

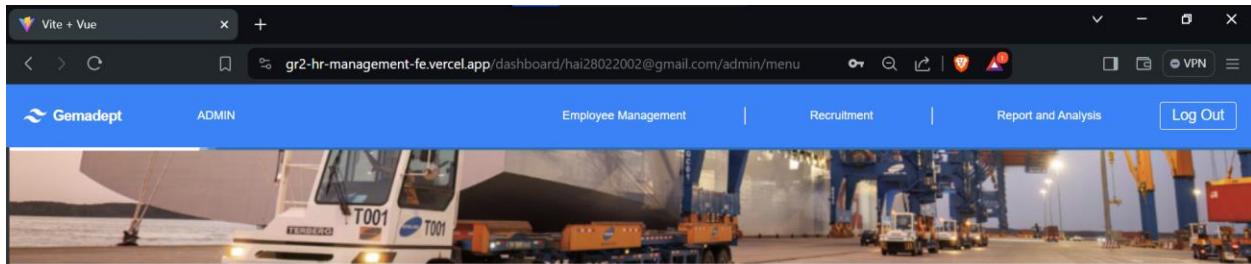
The screenshot shows a web application interface for 'Employee Management'. At the top, there's a navigation bar with links for 'Employee Management', 'Recruitment', 'Report and Analysis', and 'Log Out'. Below the navigation is a banner image of a large ship being loaded onto a truck at a port. The main content area has three tabs: 'Employee Information', 'Payroll Management' (which is selected and highlighted in blue), and 'Overall Tracking'. A search bar labeled 'Search employee by Name' is present. Below the search bar is a table with columns: ID, Employee Email, Salary (per hour), WeeklyHours, Bonus, Monthly Salary, and Status. The table contains 6 rows of data.

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21,00	7:30:00	\$0,00	\$157,50	Suspending
2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$0,00	\$51.192,00	Suspending
3	scannop2@who.int	\$21,00	480:00:00	\$0,00	\$10.080,00	Suspending
4	inoni3@businesswire.com	\$23,00	7:30:00	\$0,00	\$172,50	Suspending
5	bsimmers4@gizmodo.com	\$30,00	12:30:00	\$0,00	\$375,00	Suspending
6	nhandman5@amazon.com	\$23,00	28:03:00	\$0,00	\$645,15	Suspending

Figure 2.26 – 2.29: Website on Firefox

### Brave:

The screenshot shows a web application interface titled 'Hr Management'. The main content area features a large white box with a green checkmark icon. Below the icon, the word 'Success' is displayed in bold. Underneath 'Success', a message reads 'You are now logged in'. At the bottom of the box is a purple button labeled 'Continue'.



## HR Management

Employee Checked In  
349

Time  
1:03:02 PM

Employee Checked Out  
349



Employee Management



Recruitment



Report & Analysis

A screenshot of the "Employee Information" section of the dashboard. The top navigation bar is identical to the first screenshot. The main content area features a search bar with the placeholder "Search employee by Name" and an "Add User" button. Below this are four employee profiles in cards:



Dr Loyns  
Senior Financial Analyst

Address: 260 Fulton Trail  
Phone: 485-999-3342  
Email: mloyns0@gs.gd



Ms Stoneham  
Mechanical Systems Engineer

Address: 61188 Cambridge Crossing  
Phone: 873-386-1381  
Email: cstoneham1@zimio.com



Ms Cannop  
Analog Circuit Design manager

Address: 167 Emmet Alley  
Phone: 957-805-7791  
Email: scannop2@who.int



Dr Noni  
Biostatistician III

Address: 3342 Pettie Avenue  
Phone: 842-922-2795  
Email: lnoni3@businesswire.com

The screenshot shows a web browser window with a dark theme. At the top, there's a header with a logo, the text "Gemadept", "ADMIN", and navigation links for "Employee Management", "Recruitment", "Report and Analysis", and "Log Out". Below the header is a banner image of a large ship being transported on a trailer. The main content area has three tabs: "Employee Information", "Payroll Management" (which is highlighted in blue), and "Overall Tracking". Below the tabs is a search bar with the placeholder "Search employee by Name". The main part of the screen is a table with the following data:

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21,00	7:30:00	\$0,00	\$157,50	Suspending
2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$0,00	\$51.192,00	Suspending
3	scannop2@who.int	\$21,00	480:00:00	\$0,00	\$10.080,00	Suspending
4	inoni3@businesswire.com	\$23,00	7:30:00	\$0,00	\$172,50	Suspending
5	bsimmers4@gizmodo.com	\$30,00	12:30:00	\$0,00	\$375,00	Suspending
6	nhandman5@amazon.com	\$23,00	28:03:00	\$0,00	\$645,15	Suspending
7	hdreger6@unc.edu	\$23,00	11:11:00	\$0,00	\$257,22	Suspending

Figure 2.30 – 2.33: Website on Brave

### Edge:

The screenshot shows a web browser window with a dark theme. The address bar shows the URL <https://gr2-hr-management-fe.vercel.app>. The main content area displays a success message within a white box. The message includes a green checkmark icon, the word "Success", and the text "You are now logged in". At the bottom of the message box is a purple "Continue" button.

The screenshot shows the HR Management dashboard. At the top, there are three main navigation tabs: "Employee Management" (selected), "Recruitment", and "Report and Analysis". A "Log Out" button is located in the top right corner. Below the tabs, there is a large banner image of a ship being loaded or unloaded at a port. The main title "HR Management" is centered below the banner. Underneath the title, there is a section for "Employee Checked In" showing a count of 349 and a timestamp of 12:38:37 PM. To the right, there is a section for "Employee Checked Out" showing a count of 349. Below these sections, there are three small thumbnail images: a woman working on a computer, two people shaking hands, and a person using a smartphone.

The screenshot shows the "Employee Management" page. The top navigation bar includes "Employee Management" (selected), "Recruitment", "Report and Analysis", and a "Log Out" button. Below the navigation is a banner image of a ship at a port. The main content area features three tabs: "Employee Information" (selected), "Payroll Management", and "Overall Tracking". A search bar at the top allows users to "Search employee by Name". There is also a "Add User" button. The page displays four employee profiles in a grid:

Employee	Title	Address	Phone	Email
Dr Loyns	Senior Financial Analyst	260 Fulton Trail	485-999-3342	mloyns0@is.gd
Ms Stoneham	Mechanical Systems Engineer	61188 Cambridge Crossing	873-386-1381	cstoneham1@zimbio.com
Ms Cannop	Analog Circuit Design manager	167 Emmet Alley	957-805-7791	scannop2@who.int
Dr Noni	Biostatistician III	3342 Petterle Avenue	842-922-2795	inon3@businesswire.com

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21,00	7:30:00	\$0,00	\$157,50	Suspending
2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$0,00	\$51.192,00	Suspending
3	scannop2@who.int	\$21,00	480:00:00	\$0,00	\$10.080,00	Suspending
4	inoni3@businesswire.com	\$23,00	7:30:00	\$0,00	\$172,50	Suspending
5	bsimmers4@gizmodo.com	\$30,00	12:30:00	\$0,00	\$375,00	Suspending
6	nhandman5@amazon.com	\$23,00	28:03:00	\$0,00	\$645,15	Suspending
7	hdreger6@unc.edu	\$23,00	11:11:00	\$0,00	\$267,22	Suspending

Figure 2.34 – 2.37: Website on Edge

We tested login in and other tests on various browser and our website held itself well. Hence, this quality passed our benchmark.

## Group 2: Search and Input

**Quality 6:** The database searching and filtering options should return the correct result.  
**Testing measure:** Use the search function with a variety of keywords and random words to note the displayed information.

Address: 88098 Continental Road	Address: 80432 Badeau Avenue
Phone: 327-622-3817	Phone: 161-921-1659
Email: aupjohn33@geocities.jp	Email: frabjohn38@wufoo.com

[Employee Information](#) | [Payroll Management](#) | [Overall Tracking](#)

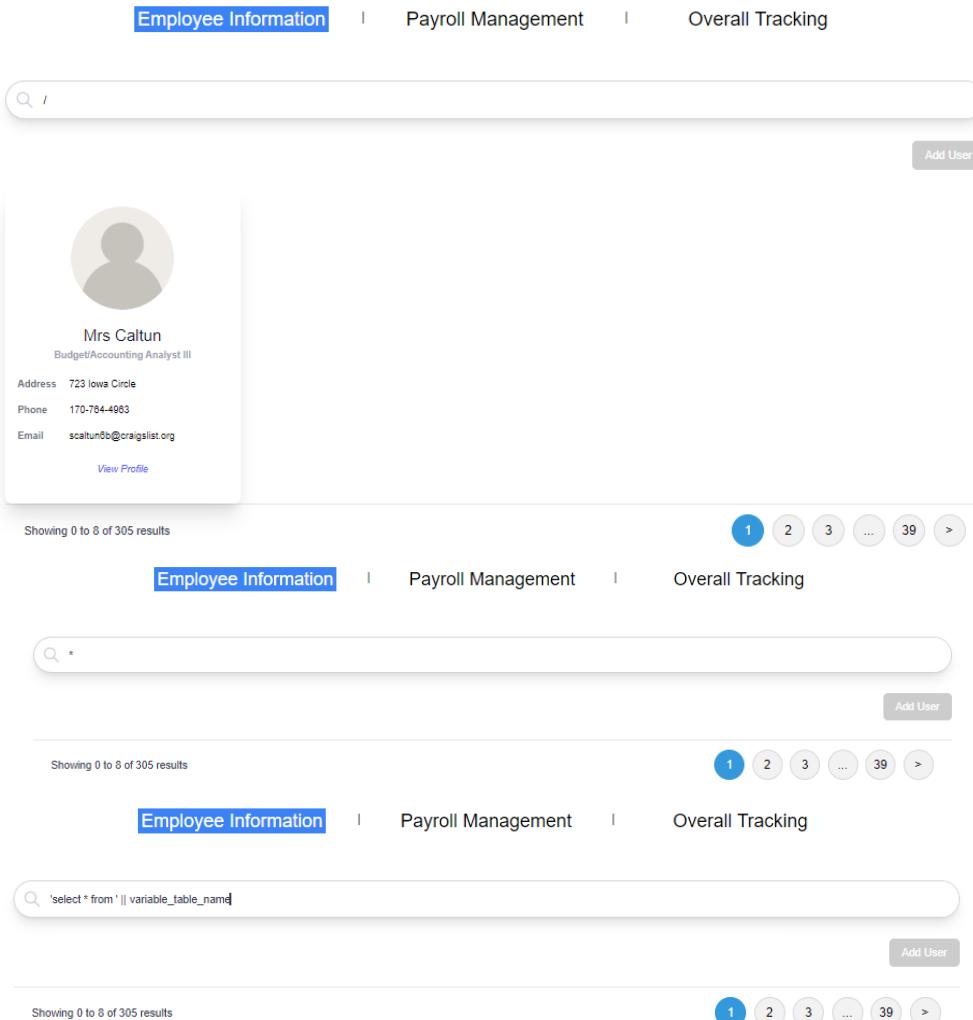
[Add User](#)

 <p><b>Dr Loyns</b> Senior Financial Analyst</p> <p>Address: 280 Fulton Trail Phone: 485-990-3342 Email: mloyns0@sgd.com</p> <p><a href="#">View Profile</a></p>	 <p><b>Dr Noni</b> Biostatistician III</p> <p>Address: 3342 Petterle Avenue Phone: 842-922-2795 Email: inoni3@businesswire.com</p> <p><a href="#">View Profile</a></p>	 <p><b>Ms Dreger</b> Senior Sales Associate</p> <p>Address: 49830 Pennsylvania Terrace Phone: 675-254-5559 Email: hdreger@unc.edu</p> <p><a href="#">View Profile</a></p>	 <p><b>Dr Wylie</b> Biostatistician I</p> <p>Address: 63337 Messerschmidt Way Phone: 560-571-1938 Email: jwyliea@google.ru</p> <p><a href="#">View Profile</a></p>
 <p><b>Dr Ren</b> Programmer Analyst II</p> <p>Address: 5197 Cody Street Phone: 738-731-0068 Email: iren@uic.com</p>	 <p><b>Dr Plenderleith</b> Computer Systems Analyst III</p> <p>Address: 6287 Stephen Center Phone: 359-598-3517 Email: aplederleith@upscen.com</p>	 <p><b>Dr McGlynn</b> Senior Quality Engineer</p> <p>Address: 99058 Carberry Junction Phone: 138-875-7583 Email: smcglynn@lulu.com</p>	 <p><b>Rev Goodright</b> Junior Executive</p> <p>Address: 9 Rutledge Terrace Phone: 488-753-4310 Email: egoodright12@hino.com</p>

[Employee Information](#) | [Payroll Management](#) | [Overall Tracking](#)

[Add User](#)

 <p><b>Ms Stoneham</b> Mechanical Systems Engineer</p> <p>Address: 61188 Cambridge Crossing Phone: 873-386-1381 Email: cstoneham1@zimbio.com</p> <p><a href="#">View Profile</a></p>	 <p><b>Rev Gotecliffe</b> Software Engineer II</p> <p>Address: 927 Canary Plaza Phone: 245-814-3351 Email: bgotecliffe8@webs.com</p> <p><a href="#">View Profile</a></p>	 <p><b>Mr Lineham</b> Software Test Engineer I</p> <p>Address: 3 Larry Parkway Phone: 381-377-8938 Email: fineham1@ed.gov</p> <p><a href="#">View Profile</a></p>	 <p><b>Mr Hawkswood</b> Product Engineer</p> <p>Address: 60013 Lakewood Parkway Phone: 807-508-4514 Email: rhawkswood@paginegialle.it</p> <p><a href="#">View Profile</a></p>
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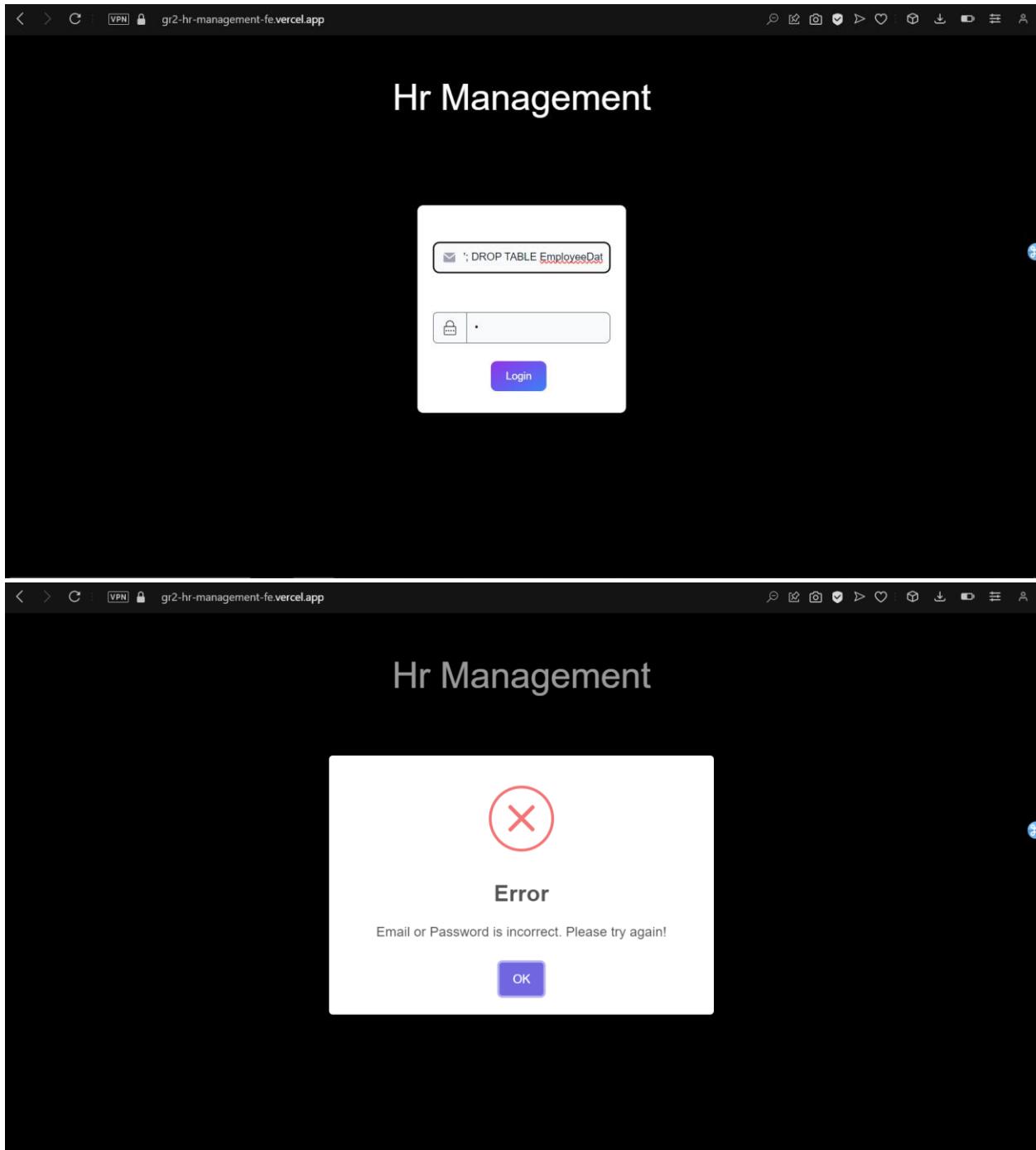


*Figure 2.38 – 2.43: Testing search query*

We tested the website's query with a variety of input from words, names, to special characters, and as can be seen, the search returns accurate results and does not allow special characters, hence this quality passed our benchmark.

**Quality 12:** Proper input sanitization should be checked to prevent code injection or unintended characters. Additionally, handling of special characters, whitespace, and input encoding should be validated.

**Testing measure:** Test all input fields on the website against 20 different test cases of varying error.



This screenshot shows a table of user data with various controls below it.

ID	Name	Role	Action
1	John Doe	Manager	
2	Jane Smith	Employee	
3	Bob Johnson	Employee	
...			
39	David Wilson	Employee	
>			

Controls below the table:

- Search bar: "I@#\$%^&\*(%)[];\"<>,./?"
- "Add User" button.
- Pagination: "Showing 0 to 8 of 305 results", page numbers 1, 2, 3, ..., 39, >.



Add User

Showing 0 to 8 of 305 results

1 2 3 ... 39 >



Add User



**Ms Lillywhite**  
Environmental Tech

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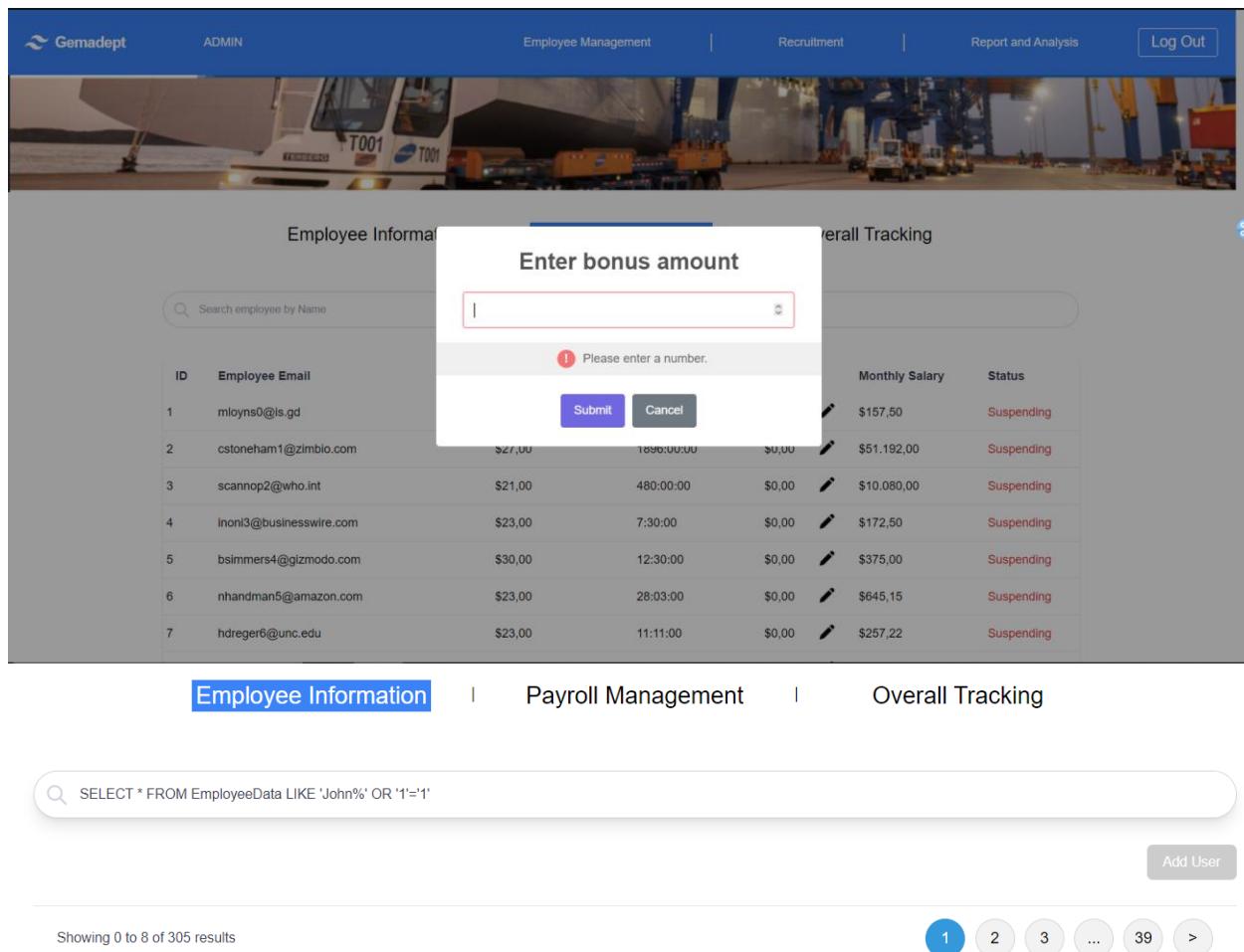
Gemadepot ADMIN Employee Management | Recruitment | Report and Analysis Log Out



Employee Information | Payroll Management | Overall Tracking

Search employee by Name

ID	Employee Email	Submit	Cancel	Monthly Salary	Status
1	mloyns0@ls.gd	\$27,00	1896:00:00	\$0,00	\$157,50 Suspending
2	cstoneham1@zimbio.com	\$21,00	480:00:00	\$0,00	\$51.192,00 Suspending
3	scannop2@who.int	\$23,00	7:30:00	\$0,00	\$10.080,00 Suspending
4	inoni3@businesswire.com	\$30,00	12:30:00	\$0,00	\$172,50 Suspending
5	bsimmers4@glzmodo.com	\$23,00	28:03:00	\$0,00	\$375,00 Suspending
6	nhandman5@amazon.com	\$23,00	11:11:00	\$0,00	\$645,15 Suspending
7	hdreger6@unc.edu	\$23,00		\$0,00	\$257,22 Suspending



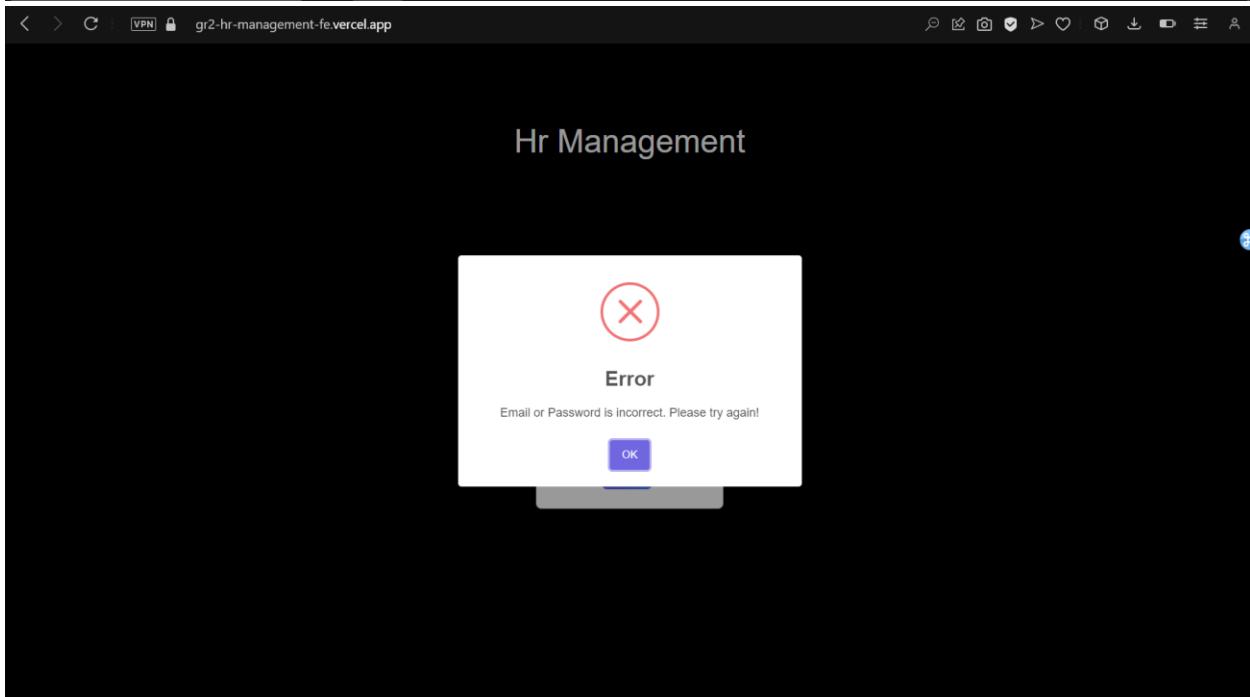
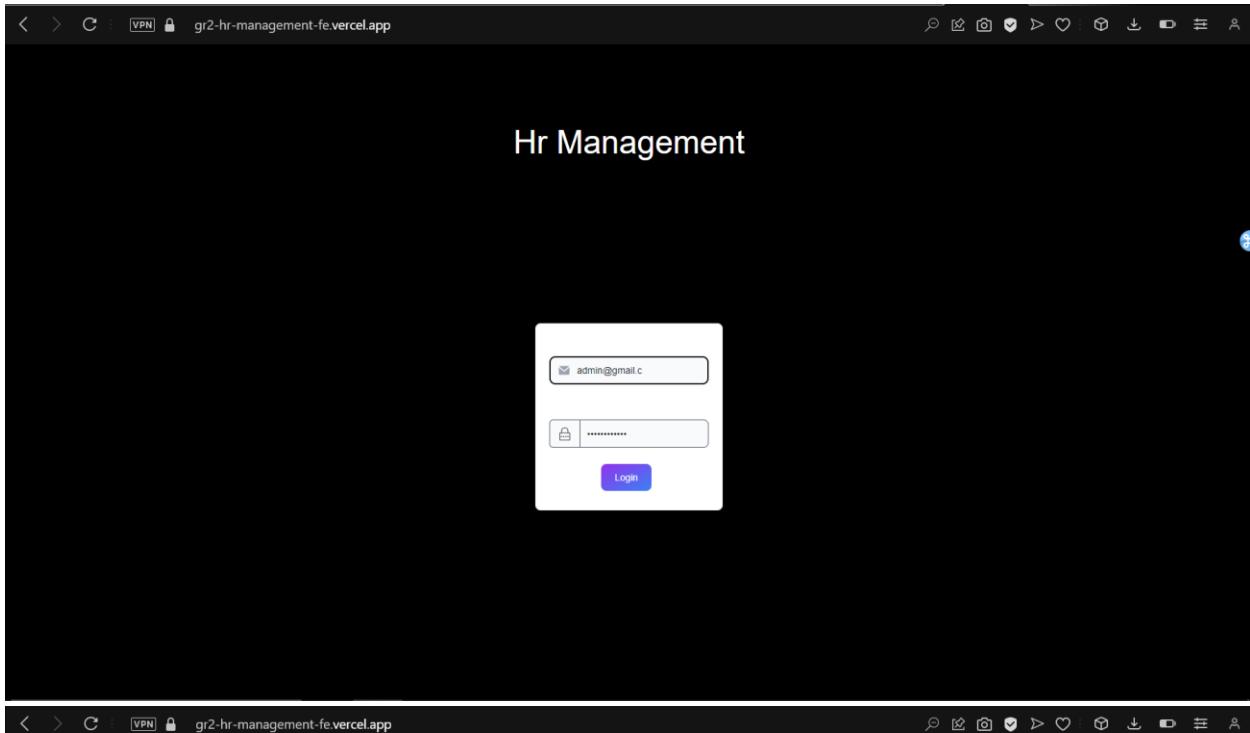
*Figure 2.44 – 2.51: Input Testing*

After testing, we can see that our input has passed a good number of test cases, and those with severe priority are addresses. Hence, this quality passes our benchmark.

### Group 3: Other Tests

**Quality 14:** Error messages should be displayed when invalid data is entered, providing clear instructions on how to correct them.

**Testing measure:** Wrongly execute any input and observe whether error messages appear.



The figure consists of two vertically stacked screenshots of a web-based application interface. Both screenshots have a header bar at the top with the 'Gemadepot' logo, 'ADMIN' role, and navigation links for 'Employee Management', 'Recruitment', 'Report and Analysis', and 'Log Out'. Below the header is a banner image of a port or industrial area with large cranes.

The main content area contains three tabs: 'Employee Information', 'Payroll Management' (which is currently selected), and 'Overall Tracking'. A search bar labeled 'Search employee by Name' is positioned above a table of employee data. The table has columns for 'ID', 'Employee Email', 'Monthly Salary', and 'Status'. Seven rows of data are listed, each with an edit icon.

A modal dialog box titled 'Enter bonus amount' is overlaid on the page. It contains a single input field with the placeholder 'e'. At the bottom of the dialog are two buttons: 'Submit' (purple) and 'Cancel' (gray). The background of the main content area is dimmed.

In the second screenshot, the input field in the dialog now contains a red exclamation mark icon followed by the text 'Please enter a number.' This indicates that the system has detected an invalid input and provided a specific error message.

ID	Employee Email	Monthly Salary	Status
1	mloyns0@ls.gd	\$157,50	Suspending
2	cstoneham1@zimbio.com	\$51,192,00	Suspending
3	scannop2@who.int	\$10,080,00	Suspending
4	inoni3@businesswire.com	\$172,50	Suspending
5	bsimmers4@gizmodo.com	\$375,00	Suspending
6	nhandman5@amazon.com	\$645,15	Suspending
7	hdreger6@unc.edu	\$257,22	Suspending

*Figure 2.52 – 2.55: Instruction Testing*

The invalid text prompt is correctly showing on our website. Hence this quality passed out benchmark.

**Quality 16:** API connection to other services (i.e., existing ERP, Google sign in, etc.) should have little error.

**Testing measure:** Intentionally disrupt network connectivity during an ongoing API request and verify that the system handles the timeout or connection failure gracefully.

Gemadepot ADMIN Employee Management | Recruitment | Report and Analysis Log Out

Employee Information | Payroll Management | Overall Tracking

Search employee by Name

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21.00	7.30 00	\$0.00	\$157.50	Suspending
2	cstoneham1@zimbio.com	\$27.00	1896.00 00	\$0.00	\$51.192.00	Suspending
3	scannop2@who.int	\$21.00	480.00 00	\$0.00	\$10.080.00	Suspending
4	inoni3@businesswire.com	\$23.00	7.30 00	\$0.00	\$172.50	Suspending
5	bsimmers4@gizmodo.com	\$30.00	12.30 00	\$0.00	\$375.00	Suspending
6	nhandman5@amazon.com	\$23.00	28.03 00	\$0.00	\$645.15	Suspending
7	hdreger6@unc.edu	\$23.00	11.11 00	\$0.00	\$257.22	Suspending
8	meverson7@reference.com	\$27.00	24.25 00	\$0.00	\$659.25	Suspending
9	bgoteccliffe8@webs.com	\$23.00	26.23 00	\$0.00	\$606.82	Suspending

Gemadepot ADMIN Employee Management | Recruitment | Report and Analysis Log Out

Employee Information | Payroll Management | Overall Tracking

Search employee by Name

Enter bonus amount

1000

Request failed: TypeError: Failed to fetch

Submit Cancel

ID	Employee Email	Salary (per hour)	WeeklyHours	Bonus	Monthly Salary	Status
1	mloyns0@is.gd	\$21.00	7.30 00	\$0.00	\$157.50	Suspending
2	cstoneham1@zimbio.com	\$27.00	1896.00 00	\$0.00	\$51.192.00	Suspending
3	scannop2@who.int	\$21.00	480.00 00	\$0.00	\$10.080.00	Suspending
4	inoni3@businesswire.com	\$23.00	7.30 00	\$0.00	\$172.50	Suspending
5	bsimmers4@gizmodo.com	\$30.00	12.30 00	\$0.00	\$375.00	Suspending
6	nhandman5@amazon.com	\$23.00	28.03 00	\$0.00	\$645.15	Suspending
7	hdreger6@unc.edu	\$23.00	11.11 00	\$0.00	\$257.22	Suspending
8	meverson7@reference.com	\$27.00	24.25 00	\$0.00	\$659.25	Suspending
9	bgoteccliffe8@webs.com	\$23.00	26.23 00	\$0.00	\$606.82	Suspending

L7	A	B	C	D	E	F	G	H	I	J	K	L
1	id	email	base_salary	total_work_hour	bonus	actual_pay						
2	1	mloyns0@is.gd	\$21,00	7:30:00	\$0,00	\$157,50						
3	2	cstoneham1@zimbio.com	\$27,00	1896:00:00	\$0,00	\$51,192,00						
4	3	scannop2@who.int	\$21,00	480:00:00	\$0,00	\$10,080,00						
5	4	inoni3@businesswire.com	\$23,00	7:30:00	\$0,00	\$172,50						
6	5	bsimmers4@gizmodo.com	\$30,00	12:30:00	\$0,00	\$375,00						
7	6	nhandman5@amazon.com	\$23,00	28:03:00	\$0,00	\$645,15						
8	7	hdreger6@unc.edu	\$23,00	11:11:00	\$0,00	\$257,22						
9	8	meverson7@reference.com	\$27,00	24:25:00	\$0,00	\$659,25						
10	9	bgatecliffe8@webs.com	\$23,00	26:23:00	\$0,00	\$606,82						
11	10	babramson9@icq.com	\$25,00	29:21:00	\$0,00	\$733,75						
12	11	jwyliea@google.ru	\$24,00	17:46:00	\$0,00	\$426,40						
13	12	kwhewillb@wired.com	\$23,00	27:49:00	\$0,00	\$639,78						
14	13	mrfrayc@elegantthemes.com	\$26,00	20:44:00	\$0,00	\$539,07						
15	14	wcannawayd@wired.com	\$23,00	30:56:00	\$0,00	\$711,47						
16	15	gdytee@usatoday.com	\$27,00	10:56:00	\$0,00	\$295,20						
17	16	flinehamf@ed.gov	\$26,00	6:33:00	\$0,00	\$170,30						
18	17	lsimong@baidu.com	\$26,00	23:42:00	\$0,00	\$616,20						
19	18	sfairyh@cnet.com	\$29,00	11:23:00	\$0,00	\$330,12						
20	19	lvlahosi@pen.io	\$23,00	8:21:00	\$0,00	\$192,05						
21	20	ngoodallj@tiny.cc	\$27,00	48:08:00	\$0,00	\$1,299,60						
22	21	lrenk@weibo.com	\$22,00	14:53:00	\$113,00	\$327,43						

Trang tính1 EmployeeRole EmployeeData Employee Attendance 05/2023 Salary of May

Figure 2.56 – 58: API connectivity check

We tested the API connectivity by disconnecting the device from the internet and attempted to add information on the website. As can be seen, the API failed to fetch, and data was not added to the database. This quality hence passed our benchmark.

## Report

So, we were able to conduct quality testing for 6 out of 17 of our quality tests that were defined in the previous document. This means that we have yet to achieve the substantial amount of quality that was defined, and our product is lacking a significant amount. Moreover, some important and urgent quality has not been done.

The reason that we have not completed all the quality defined is due to the fact that our sprint was originally planned to be as long as 21 days, but we have only done 10 days of work as of this period of time. Hence, we can state that our backlog item (HRM website) does not satisfy the quality requirements defined.

### 3. Rationale and Analysis

#### What Worked:

- Clear Task Definition:** The sprint backlog items, in my opinion, had well-defined goals and acceptance criteria. This helps teamwork become better while also making tasks in the sprint easier to follow through.

- **Achievable Thresholds:** We created achievable thresholds for our sprint goals and adhered to the SMART framework, so we had reasonable goals to strive for. Which adds to our ability to achieve a lot of quality in a limited amount of time.
- **Efficient Communication:** We had multiple channels of communication, which became very useful for exchanging ideas, solutions and urge one another to do tasks.

#### **What Did Not Work:**

- **Rushed Development:** As we had to do our sprint in a timeframe lower than what was planned, development activities were rushed, which leads to some compromise in code quality and could potentially introduce defects.
- **Inefficient Time Allocation:** With a limited timeframe, time was not always allocated efficiently, which results in delays or unfinished tasks towards the end of the sprint.
- **Too Many Qualities:** We tried to achieve too many quality metrics at the same time and may have stretched the team's focus too thin.

#### **Future Recommendations:**

- **Improved Time Management:** We believe that we should put time tracking and task prioritizing strategies into practice. Which will hopefully help avoid last-minute rushes, and divide work into smaller, more manageable chunks and allot time wisely.
- **Quality Over Quantity:** We need to focus on tasks that have a higher priority first (e.g., urgent, and important task). We believe that would help us to concentrate efforts on key quality aspects, and the team can deliver more impactful results within the sprint timeframe, while putting the less important task for later.
- **Continuous Improvement:** As a team, we should strive for greater growth by valuing input, introspection, and using lessons from the past. To assess sprint performance, pinpoint areas for improvement, and execute iterative modifications to improve procedures and practices, more meetings are held.