

SWE-645 Assignment-1

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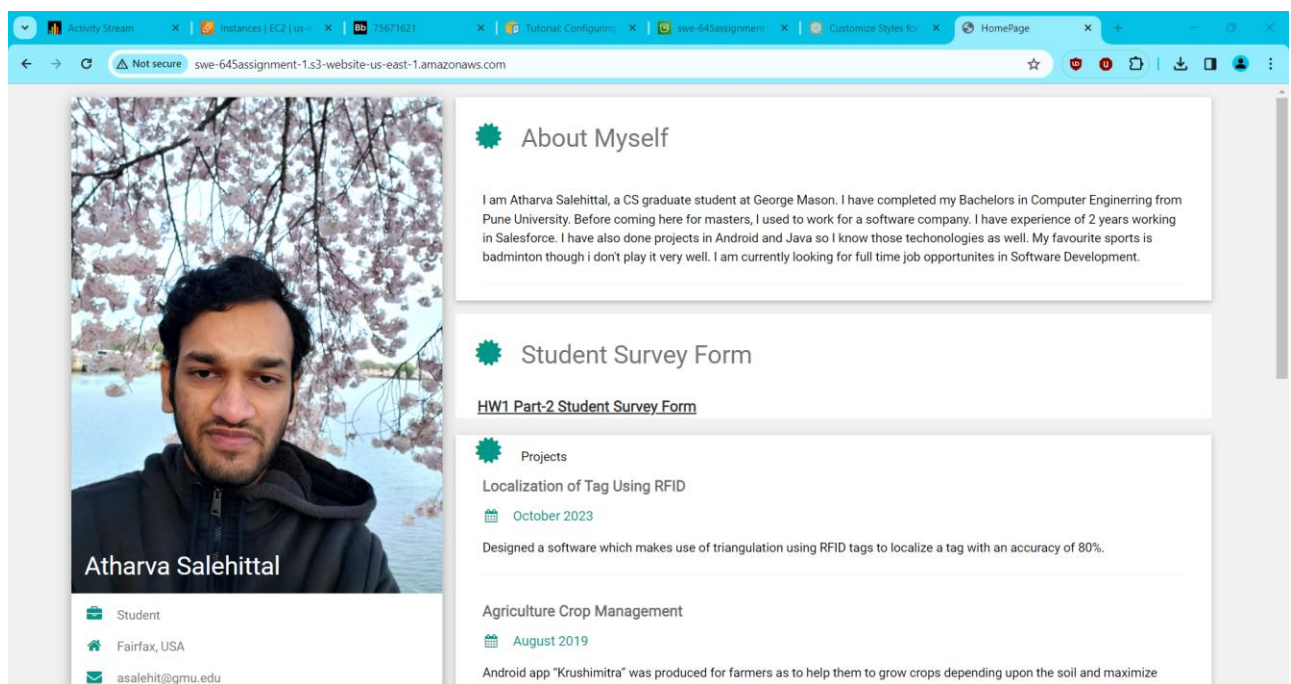
The name of the Zip folder is “HW1_AtharvaSalehittal_SWE645”. There are two folders in zip file: Part1, where the source code of Part1 of the assignment is present and Part2, where the source code of Part2 of the assignment, .pem and .war file of the dynamic web project, are present.

Part – 1

In Part 1 section, I have made my “Portfolio” website for this assignment. I’ve added image and small paragraph as well. I’ve created AWS S3 instance and moved my website there. Below is the link and snap of the website:

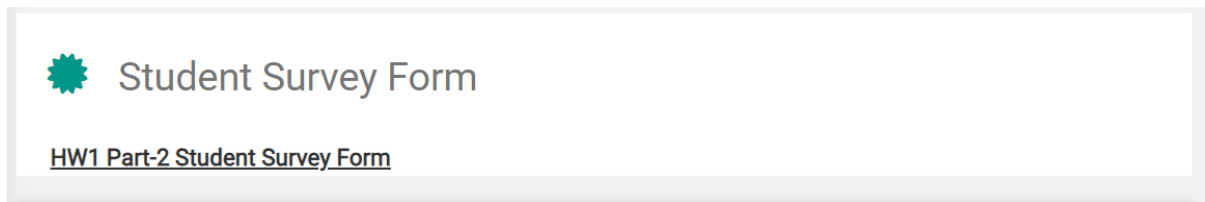
<http://swe-645assignment-1.s3-website-us-east-1.amazonaws.com/>

Link of my website hosted on the AWS S3 instance:



Student Survey Form Section:

This section has the link to HW1 Part2- Student Survey Form so that it is easier to locate the link of the Student Survey Form. Below is the snap of it:



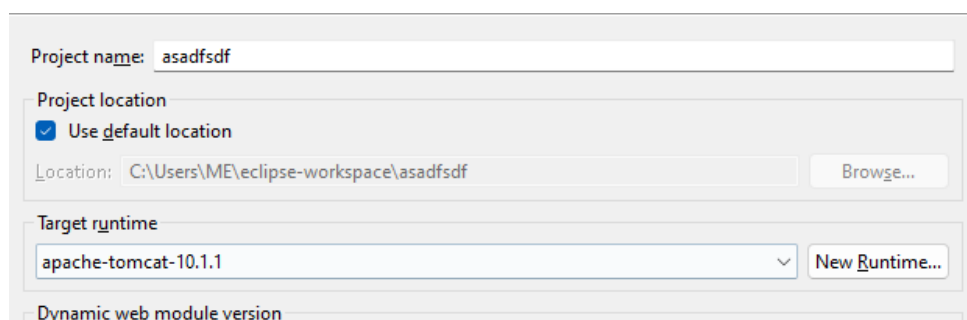
Clicking on the link the student survey form is opened as shown below:

A screenshot of a web browser displaying a 'Student Survey Form'. The form is centered on a light gray background. It contains six input fields, each preceded by a label and an asterisk: 'First Name *', 'Last Name *', 'Street Address *', 'City *', 'State *', and 'Zip *'. The browser's address bar shows the URL 'https://ec2-35-153-129-180.compute-1.amazonaws.com/SurveyForm/'.

Part – 2

Steps followed for the Installation and Setup to run the Part 2 of the assignment:

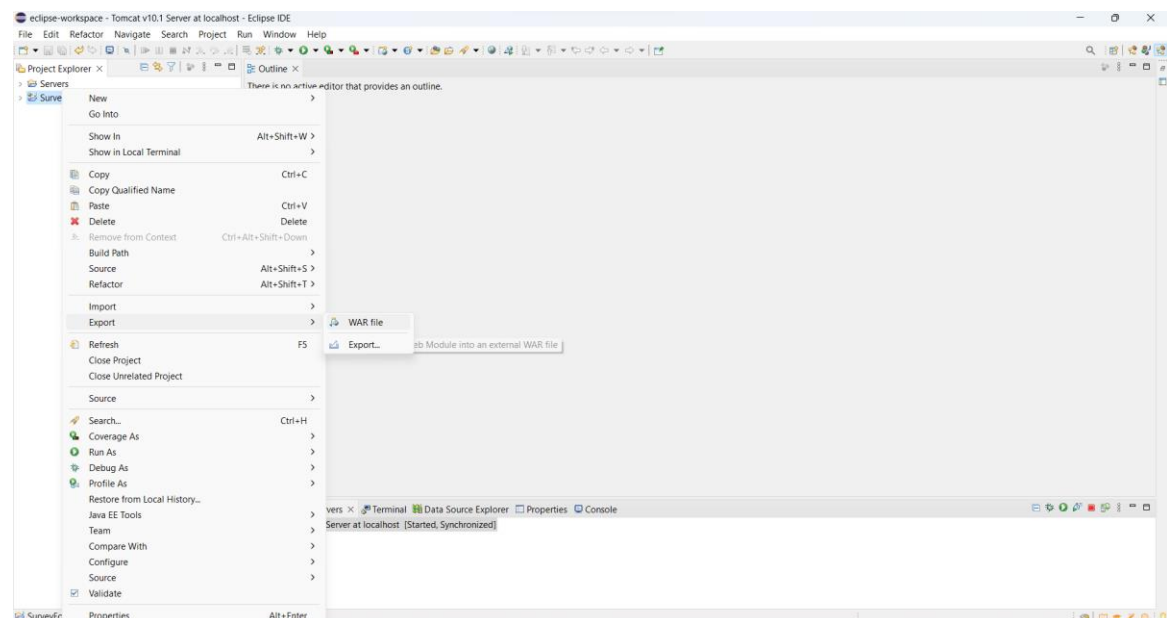
1. Install Eclipse IDE and launch it.
2. Download Apache Tomcat for the system.
3. In Eclipse, create a Dynamic Web Project and give name to the project which I have given as “SurveyForm”.
4. Select “Target Runtime” as the recently downloaded Apache Tomcat run file.



5. Make sure to select .xml file generator which will be helpful if you want to modify the name of the html file because default name is index.html

☐ Generate web.xml deployment descriptor

6. After creating Dynamic web project, navigate to src >> main >> webapps folder in the project and create required html and css files.
7. Write the required code of the survey form, Run the project on the Tomcat server, run as >> run on the server if successful follow the below steps else solve the errors.
8. Once done, right click on the project name on the left panel >> Go to Export >> War file. War file is downloaded.




9. Login in AWS and click on “Create EC2 Instance”. EC2 Dashboard will be opened.
10. On the left pane under Images dropdown. Select AMI Catalog

▼ Images

AMIs

AMI Catalog

11. Go to “AWS Marketplace AMIs” and search for “Apache Tomcat packaged by Bitnami”. You get one card. Click on select.



Apache Tomcat packaged by Bitnami

By [Bitnami by VMware](#) | Ver 8.5.85-8-r08 on Debian 11

★★★★☆ 7 AWS reviews

Apache Tomcat is a web server designed to host and run Java-based web applications, and is one of the most widely adopted application servers in the world. This lightweight server provides great performance for applications running in production environments. This application is based on Java Ser...

Select

12. Select Continue. Name the server and select the instance type as “t2micro” since it is FREE TIER ELIGIBLE.

ab8a-2fcfcb81353

Get advice on instance type selection...

t2.nano

Family: t2 1 vCPU 0.5 GiB Memory Current generation: true

This instance type is not supported by the selected AMI

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true

Free tier eligible

t2.small

Family: t2 1 vCPU 2 GiB Memory Current generation: true

t2.medium

Family: t2 2 vCPU 4 GiB Memory Current generation: true

t2.large

Family: t2 2 vCPU 8 GiB Memory Current generation: true

t2.xlarge

Family: t2 4 vCPU 16 GiB Memory Current generation: true

t2.2xlarge

t3a.small

Family: t3a 2 vCPU 2 GiB Memory Current generation: true

device type

ENA Enabled

Yes

without creating a new subscription.

to this software and agree that your

All generations

Compare instance types

The AMI vendor recommends using a t3a.small instance (or larger) for the best experience with this product.

13. Create key-value pair and name them. After naming them .pem will be downloaded. My .pem file is surveyform-key. We use this file later.

14. Connect to Instance through SSH.


EC2 Instance Connect



Session Manager

SSH client


EC2 serial console


Instance ID

 [i-0096a4f99f641139d](#) (SWE-645SurveyForm)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is `surveyform-key.pem`
3. Run this command, if necessary, to ensure your key is not publicly viewable.
 `chmod 400 "surveyform-key.pem"`
4. Connect to your instance using its Public DNS:
 `ec2-35-153-129-180.compute-1.amazonaws.com`

Example:

```
 ssh -i "surveyform-key.pem" admin@ec2-35-153-129-180.compute-1.amazonaws.com
```

 **Note:** In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

```

bitnami@ip-172-31-34-120: ~ × + ▾
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\athar> cd Downloads
PS C:\Users\athar\Downloads> ssh -i "surveyform-key.pem" bitnami@ec2-35-153-129-180.compute-1.amazonaws.com
The authenticity of host 'ec2-35-153-129-180.compute-1.amazonaws.com (35.153.129.180)' can't be established.
ED25519 key fingerprint is SHA256:zUCJaeC1H9LNs/kqPa7rZx/p90SPtgHafbPpVFcBE5s.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-35-153-129-180.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Linux ip-172-31-34-120 5.10.0-27-cloud-amd64 #1 SMP Debian 5.10.205-2 (2023-12-31) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

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*** Welcome to the Bitnami package for Apache Tomcat 8.5.98-2 ***
*** Documentation: https://docs.bitnami.com/aws/infrastructure/tomcat/ ***
*** https://docs.bitnami.com/aws/ ***
*** Bitnami Forums: https://github.com/bitnami/vms/ ***
bitnami@ip-172-31-34-120: ~$

```

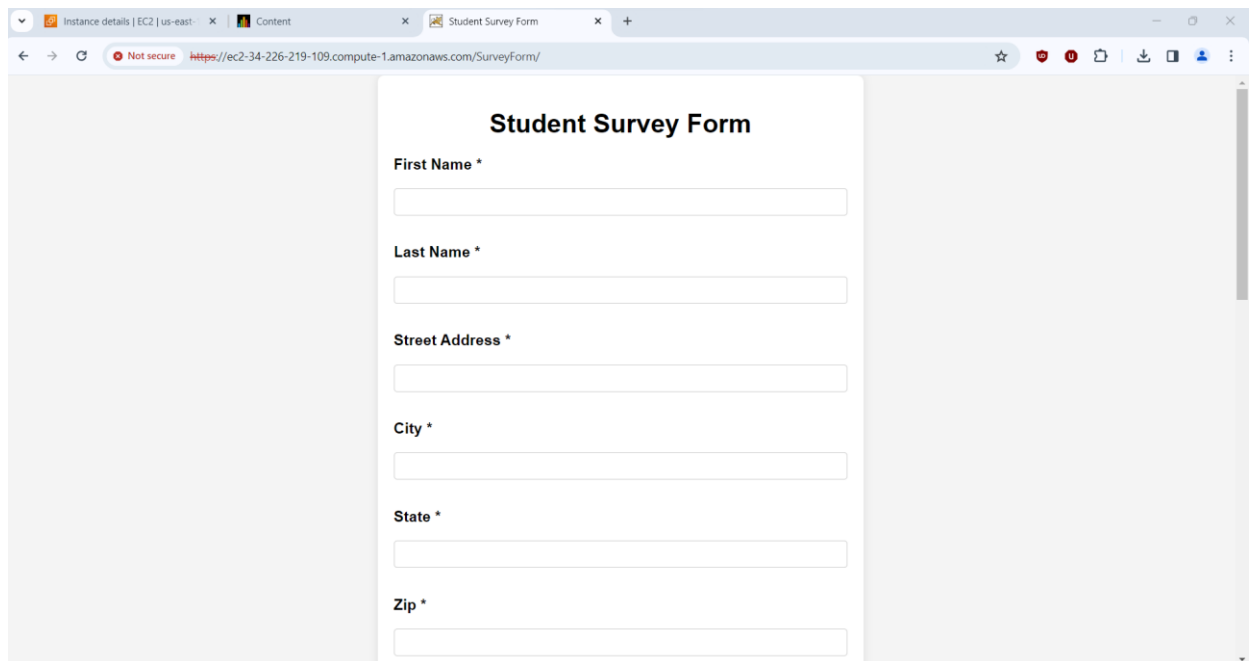
```
bitnami@ip-172-31-34-120:~$ exit
logout
Connection to ec2-35-153-129-180.compute-1.amazonaws.com closed.
PS C:\Users\athar\Downloads> scp -i "surveyform-key.pem" "SurveyForm.war" bitnami@ec2-35-153-129-180.compute-1.amazonaws.com:~/
SurveyForm.war
PS C:\Users\athar\Downloads> ssh -i "surveyform-key.pem" bitnami@ec2-35-153-129-180.compute-1.amazonaws.com
Linux ip-172-31-34-120 5.10.0-27-cloud-amd64 #1 SMP Debian 5.10.205-2 (2023-12-31) x86_64
```

17. Move that war file to the webapps folder.

```
bitnami@ip-172-31-34-120:~$ sudo cp SurveyForm.war stack/apache-tomcat/webapps
bitnami@ip-172-31-34-120:~$ cd ~/stack/apache-tomcat/webapps
bitnami@ip-172-31-34-120:~/stack/apache-tomcat/webapps$ ls
docs  examples  host-manager  manager  ROOT  SurveyForm  SurveyForm.war
```

18. Launch the URL appending the name of the war file.

<https://ec2-34-226-219-109.compute-1.amazonaws.com/SurveyForm/>



The screenshot shows a web browser window with the title 'Student Survey Form'. The address bar displays the URL <https://ec2-34-226-219-109.compute-1.amazonaws.com/SurveyForm/> with a 'Not secure' warning. The form itself is titled 'Student Survey Form' and contains six input fields, each with a label and an asterisk indicating it is required:

- First Name *
- Last Name *
- Street Address *
- City *
- State *
- Zip *

19. Open this link and you will get the Student Survey form like the below snap. Sometimes, after clicking on this link, you will be directed to the page saying “The link is not secure.”. In that case, select “Advance” button below and click on “Proceed with” Link. You will be taken to Student Survey form after that.