

DEVOPS IA2: IMPLEMENTATION OF CI/CD PIPELINE

Batch: LY-IT-B2

Tool Used: Buddy

Team Members:

Dhruv Doshi – 1814002
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1) INTRODUCTION

Buddy is a web-based and self-hosted continuous integration and delivery software for Git developers that can be used to build, test and deploy web sites and applications with code from GitHub, Bitbucket and GitLab. Configuration is performed by arranging predefined actions into sequences called pipelines. Pipelines can be triggered automatically on push to branch, manually, or recurrently. Actions include Docker-based builds, deployment to FTP/SFTP and IaaS services, delivery to version control, SSH scripts, website monitoring and conditional notifications. Contrary to other CI tools like Jenkins or Travis CI, Buddy does not use YAML files to describe the process, although the company stated support for .yml files is currently in works.

For the IA, we have developed a PHP website that is tested using PHP command line executions.

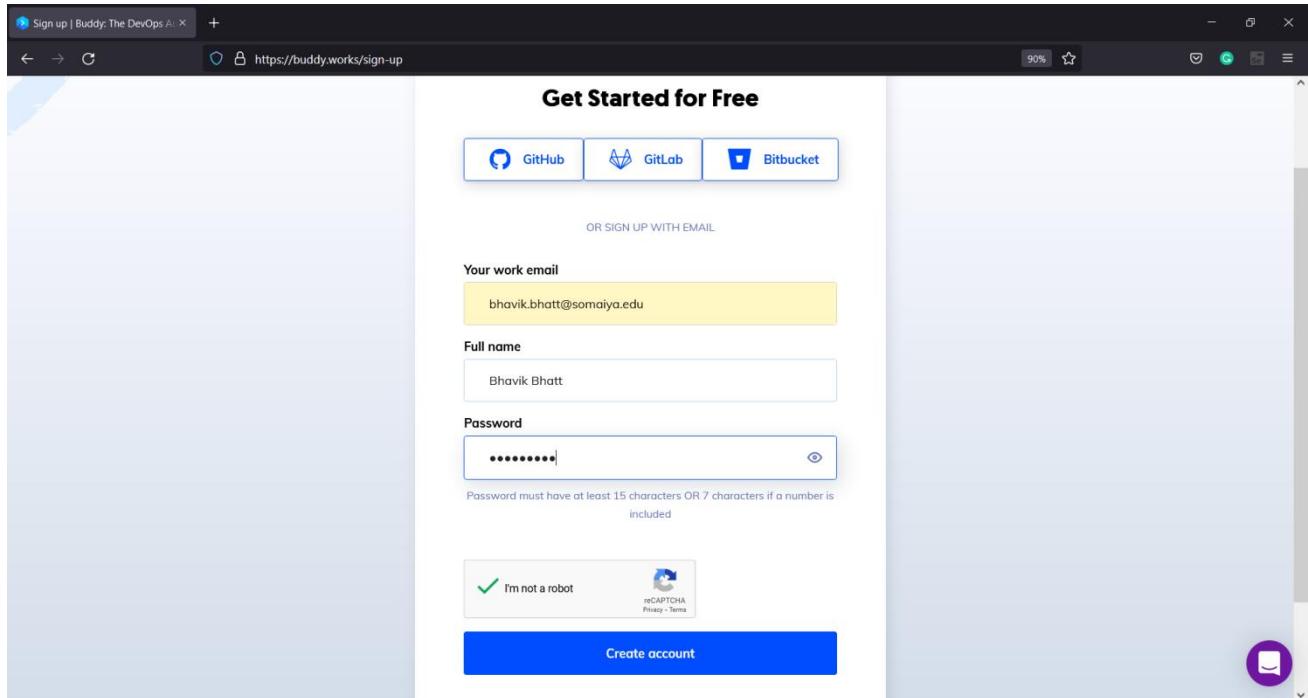
Compilation: Visual Studio Code

Version Control: Git and GitHub

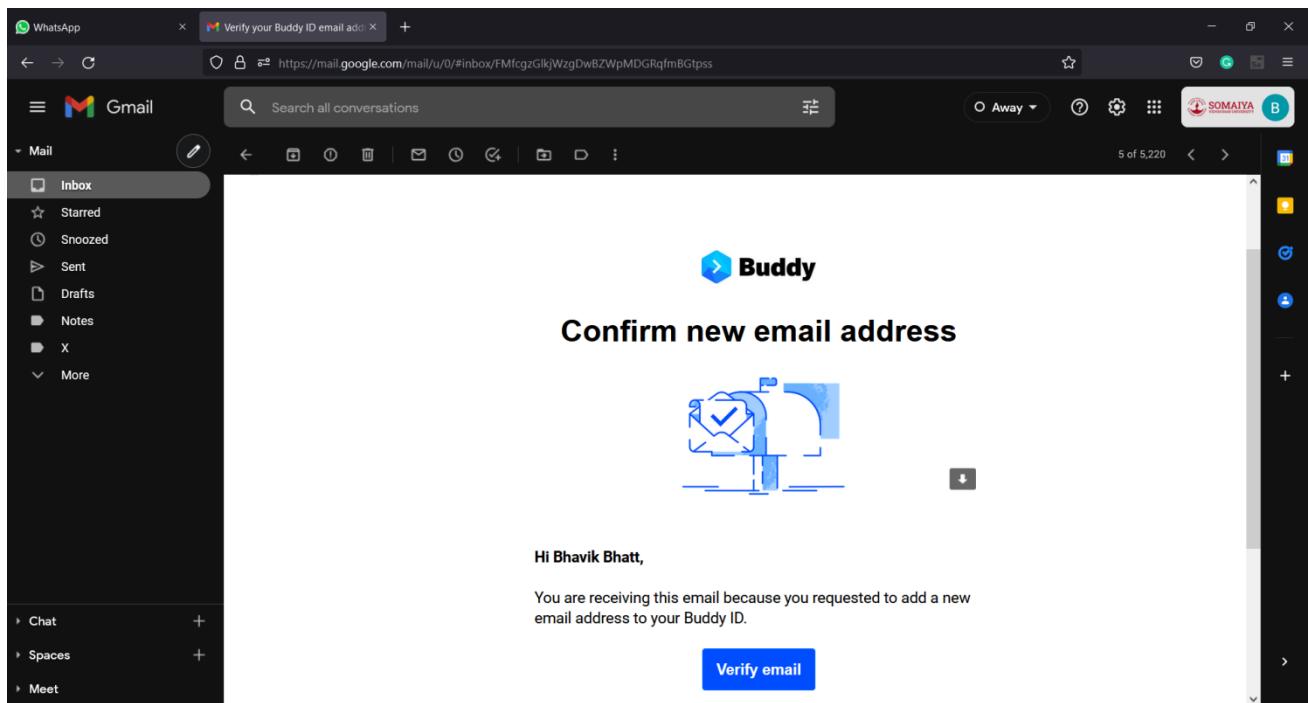
Deployment: GitHub Pages

2) GETTING STARTED WITH BUDDY

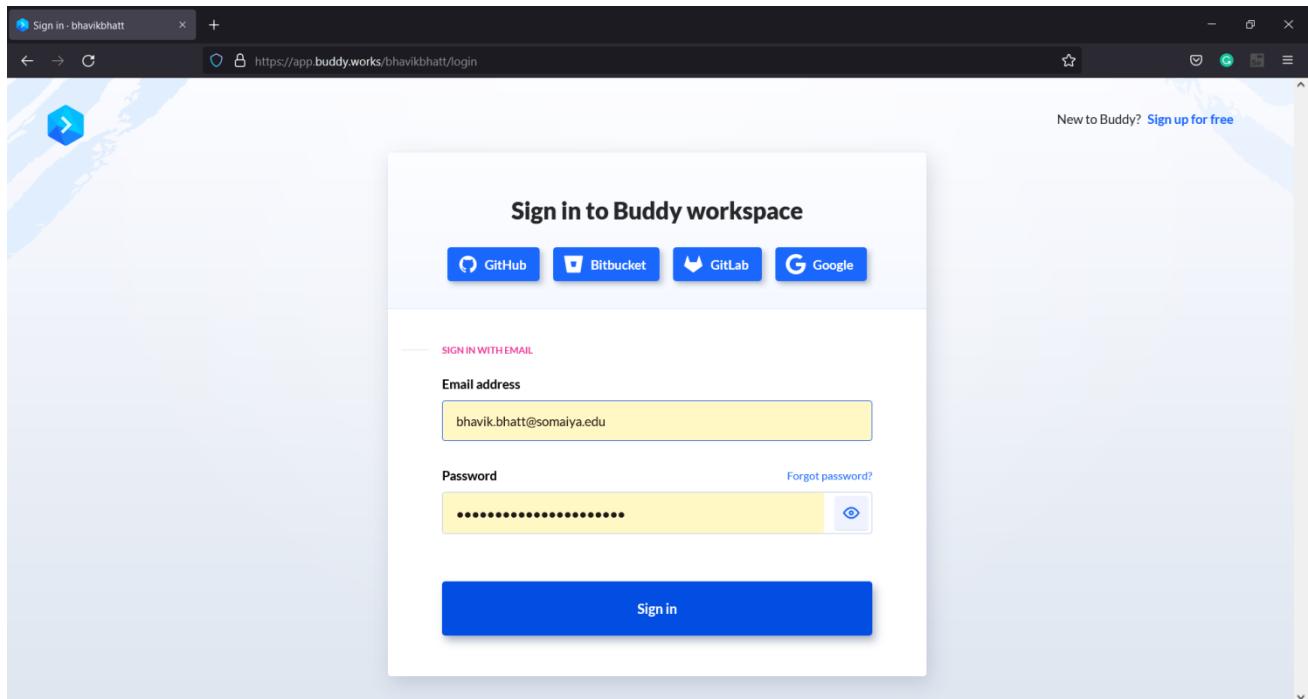
- Browsing to official Buddy website and signing up for free using email account: <https://buddy.works/>



- Verifying the Email



- Logging into the account once verified



The screenshot shows a web browser window titled "Projects - Bhavikbhatt". The URL is https://app.buddy.works/bhavikbhatt. The dashboard has a sidebar with "Dash", "Projects", "Variables, Keys & Assets", "Integrations", "Activity", "People", "Workspace Settings", "Billing" (with an "Upgrade" button), and "Docs & Support". The main area is titled "Start Build your next big thing" and features a "Create a new project" button with a green plus sign icon. A sub-header says "Automate building, testing and deploying". There are also icons for "Create a new project" (blue plus sign) and a purple message bubble.

3) CODE IMPLEMENTATION FOR WEBSITE

Index.php File:

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8" />
5     <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1">
6     <meta name="viewport" content="width=device-width, initial-scale=1.0">
7     <title>DevOps IA</title>
8     <meta name="description" content="Performing DevOps IA" />
9     <link rel="shortcut icon" href="DevOps_Logo.png">
10    <link rel="stylesheet" type="text/css" href="devops.css">
11    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0-beta2/css/all.min.css" integrity="sha512-YWzhKL2whUzgiheMoBFw8ZCKV4qphQAEvilg9FAn5VJUDwKZZxkJNuGM4XkWuk94WCrvs1k8yWNGmY1EduTA==" crossorigin="anonymous"
12      referrerpolicy="no-referrer" />
13  </head>
14  <body>
15    <div class="main_head">
16      <center><h1>DevOps</h1></center>
17    </div>
18    <div class="container">
19      <div id="bl-main" class="bl-main">
20        <section>
21          <div class="bl-box">
22            
23
24            <h2>Foundational Terminology and Concepts</h2>
25          </div>
26          <div class="bl-content">
27            <h2><b>1. Foundational Terminology and Concepts</b></h2>
28            <p><br>
29              <b>1.1</b> Introduction of DevOps,an overview of The DevOps process and continuous delivery <br>
30              <b>1.2</b> The DevOps Equation, DevOps as Folk Model, The Old View and the New View, The DevOps Compact <br>
31              <b>1.3</b> Software Development Methodologies, Operations Methodologies, Systems Methodologies <a href="#">Activate Windows</a>
32              <b>1.4</b> Development, Release, and Deployment Concepts,Infrastructure Concepts, Cultural Concepts <br>
33            </p>
34        </div>
35      </div>
36    </div>
37
38    <script src="devops.js"></script>
39    <script>
40      $(function() {
41        BoxLayout.init();
42      });
43    </script>
44    <script src="https://tympanus.net/codrops/adpacks/csscustom.js"></script>
45    <script src="https://tympanus.net/codrops/wp-content/plugins/oiopub-direct/js.php?type=banner&align=center&zone=1"></script>
46  </body>
47
48 </html>
```

```
130
131
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143
144
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152
153
154
155
156
157
158
159
160
161
162
163
```

Activate Windows
Go to Settings to activate Windows.

Devops.css File:

```
1 @import url(https://fonts.googleapis.com/css?family=Lato:300,400,700);
2
3 .main_head {
4     font-size: 50px;
5 }
6
7 .flex-parent {
8     display: flex;
9     padding: 10px;
10 }
11
12 .flex-item {
13     width: 20%;
14     padding: 20px;
15 }
16
17 .fas{
18     font-size: 25px;
19 }
20
21 img {
22     padding-top: 5%;
23     max-width: 10%;
24     opacity: 50%
25 }
26
27 .mod5 {
28     width: 50%;
29     text-align: center;
30     display: block;
31     margin: auto;
32 }
33 }
34
35 body, html { font-size: 100%; padding: 0; margin: 0; height: 100%}
```

Activate Windows
Go to Settings to activate Windows.

```
454     -ms-transform: translateY(-15px);
455     transform: translateY(-15px);
456 }
457
458 .bl-content,
459 .bl-icon-close {
460     -webkit-transition: opacity 0.1s linear 0s;
461     -moz-transition: opacity 0.1s linear 0s;
462     transition: opacity 0.1s linear 0s;
463 }
464
465 section.bl-expand .bl-content,
466 section.bl-expand .bl-icon-close {
467     pointer-events: auto;
468     opacity: 1;
469     -webkit-transition: opacity 0.3s linear 0.5s;
470     -moz-transition: opacity 0.3s linear 0.5s;
471     transition: opacity 0.3s linear 0.5s;
472 }
473
474 @media screen and (max-width: 46.5em) {
475     .bl-content,
476     .bl-box {
477         font-size: 75%;
478     }
479
480     .bl-expand .bl-box {
481         height: 130px;
482     }
483
484     .bl-content > ul li {
485         width: 40%;
486     }
487 }
```

Activate Windows
Go to Settings to activate Windows.

Devops.js File:

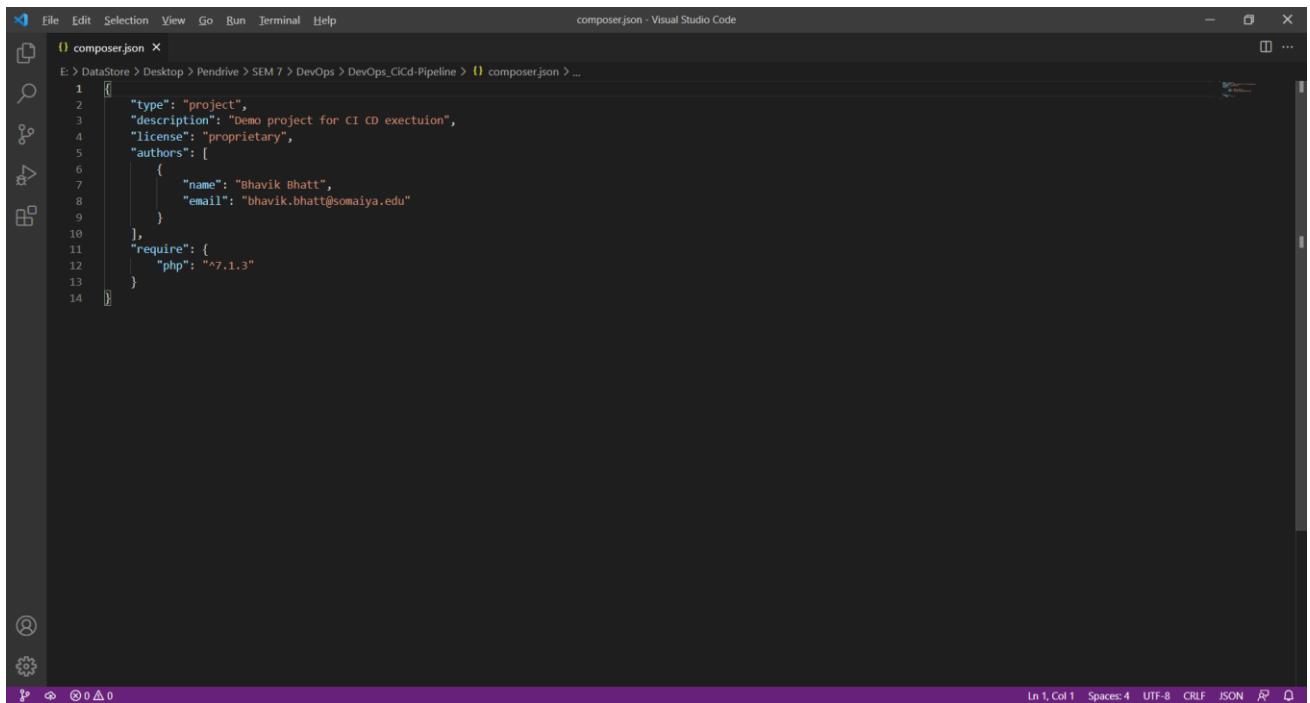
```
16 var Boxlayout = (function() {
17
18     var $el = $('#bl-main'),
19         $sections = $el.children( 'section' ),
20         // works section
21         $sectionWork = $( '#bl-work-section' ),
22         // work items
23         $workItems = $( '#bl-work-items > li' ),
24         // work panels
25         $workPanelsContainer = $( '#bl-panel-work-items' ),
26         $workPanels = $workPanelsContainer.children( 'div' ),
27         totalWorkPanels = $workPanels.length,
28         // navigating the work panels
29         $nextWorkItem = $workPanelsContainer.find( 'nav > span.bl-next-work' ),
30         // if currently navigating the work items
31         isAnimating = false,
32         // close work panel trigger
33         $closeWorkItem = $workPanelsContainer.find( 'nav > span.bl-icon-close' ),
34         transEndEventNames = {
35             'webkitTransition' : 'webkitTransitionEnd',
36             'MozTransition' : 'transitionend',
37             'OTransition' : 'OTransitionEnd',
38             'msTransition' : 'MSTransitionEnd',
39             'transition' : 'transitionend'
40         },
41         // transition end event name
42         transEndEventName = transEndEventNames[ Modernizr.prefixed( 'transition' ) ],
43         // support css transitions
44         supportTransitions = Modernizr.csstransitions;
45
46     function init() {
47         initEvents();
48     }
49
50     var $nextPanel = $workPanels.eq( currentWorkPanel );
51
52     $currentPanel.removeClass( 'bl-show-work' ).addClass( 'bl-hide-current-work' ).on( transEndEventName, function( event ) {
53         if( !$( event.target ).is( 'div' ) ) return false;
54         $( this ).off( transEndEventName ).removeClass( 'bl-hide-current-work' );
55         isAnimating = false;
56     } );
57
58     if( !supportTransitions ) {
59         $currentPanel.removeClass( 'bl-hide-current-work' );
60         isAnimating = false;
61     }
62
63     $nextPanel.addClass( 'bl-show-work' );
64
65     return false;
66 } );
67
68 // clicking the work panels close button: the current work panel slides down and the section scales up again
69 $closeWorkItem.on( 'click', function( event ) {
70
71     // scale up main section
72     $sectionWork.removeClass( 'bl-scale-down' );
73     $workPanelsContainer.removeClass( 'bl-panel-items-show' );
74     $workPanels.eq( currentWorkPanel ).removeClass( 'bl-show-work' );
75
76     return false;
77 } );
78
79 }
80
81 return { init : init };
82 }
```

Activate Windows
Go to Settings to activate Windows.

```
111
112
113     var $nextPanel = $workPanels.eq( currentWorkPanel );
114
115     $currentPanel.removeClass( 'bl-show-work' ).addClass( 'bl-hide-current-work' ).on( transEndEventName, function( event ) {
116         if( !$( event.target ).is( 'div' ) ) return false;
117         $( this ).off( transEndEventName ).removeClass( 'bl-hide-current-work' );
118         isAnimating = false;
119     } );
120
121     if( !supportTransitions ) {
122         $currentPanel.removeClass( 'bl-hide-current-work' );
123         isAnimating = false;
124     }
125
126     $nextPanel.addClass( 'bl-show-work' );
127
128     return false;
129 } );
130
131 // clicking the work panels close button: the current work panel slides down and the section scales up again
132 $closeWorkItem.on( 'click', function( event ) {
133
134     // scale up main section
135     $sectionWork.removeClass( 'bl-scale-down' );
136     $workPanelsContainer.removeClass( 'bl-panel-items-show' );
137     $workPanels.eq( currentWorkPanel ).removeClass( 'bl-show-work' );
138
139     return false;
140 } );
141
142 }
143
144 return { init : init };
145 }
```

Activate Windows
Go to Settings to activate Windows.

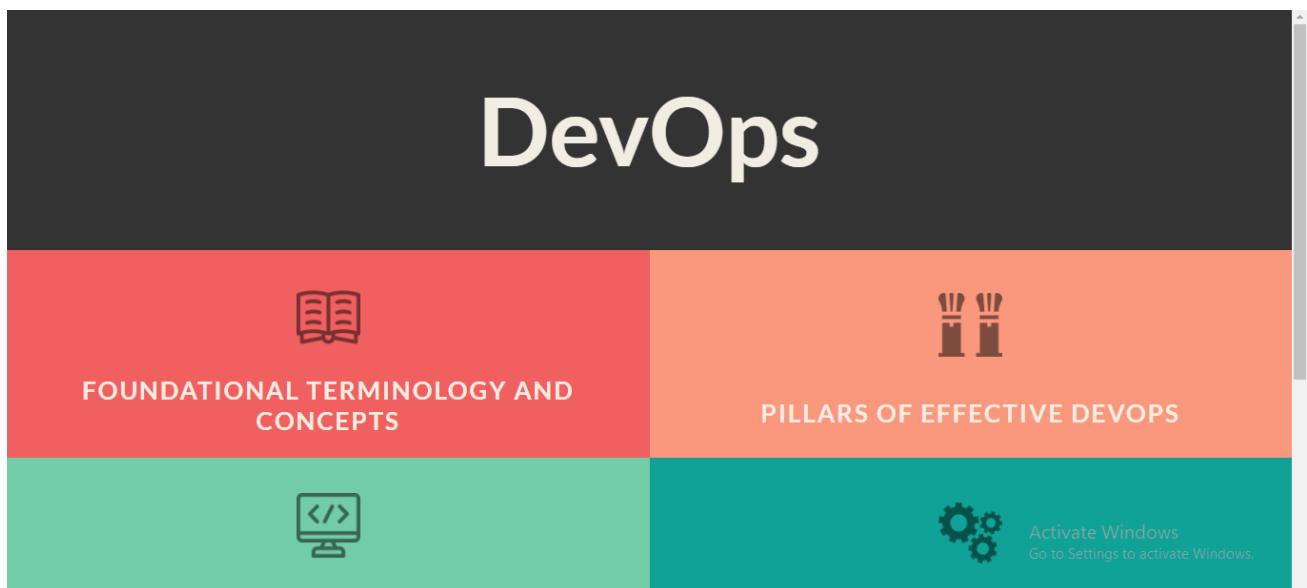
Composer.js file:



```
File Edit Selection View Go Run Terminal Help
composer.json - Visual Studio Code
E:\DataStore>Desktop>Pendrive>SEM 7>DevOps>DevOps_CiCd-Pipeline>composer.json > ...
1  {
2    "type": "project",
3    "description": "Demo project for CI CD execution",
4    "license": "proprietary",
5    "authors": [
6      {
7        "name": "Bhavik Bhatt",
8        "email": "bhavik.bhatt@somaiya.edu"
9      }
10     ],
11    "require": {
12      "php": "^7.1.3"
13    }
14 }
```

The screenshot shows the Visual Studio Code interface with the file 'composer.json' open. The code editor displays the JSON configuration for a project, specifying the type as 'project', a description, a proprietary license, authors (Bhavik Bhatt), and a PHP requirement of '^7.1.3'. The status bar at the bottom indicates the file is 14 lines long, uses 4 spaces per indentation, is in UTF-8 encoding, is a JSON file, and has no local changes.

Developed Website: https://bhavik-20.github.io/DevOps_CiCd-Pipeline/



FOUNDATIONAL TERMINOLOGY AND CONCEPTS	PILLARS OF EFFECTIVE DEVOPS				
 EFFECT OF DEVOPS ON SOFTWARE ARCHITECTURE AND CODE CONTROL	 BUILDING THE CODE AND TESTING				
 DEPLOYING AND MONITORING THE CODE					
Dhruv Doshi 1814002	Bhavik Bhatt 1814007	Piyush Chavda 1814010	Labdhji Jain 1814015	Muskaan Nandu 1814020	Activate Windows Go to Settings to activate Windows. 1814021

2. Pillars of Effective DevOps

- 2.1** Defining Collaboration, Mentorship, Cultivating mindset, Mindsets and Learning Organizations, The Role of Feedback, Review and ranking, Conflict Resolution Styles, Empathy and trust
- 2.2** Defining Affinity, Benefits of Improved Affinity, Requirements for Affinity, Measuring Affinity
- 2.3** Tools Ecosystem Overview, Software Development, Automation, Monitoring, Right Tools for Real Problem, Embracing Open Source, Standardization of Tools, Consistent Processes for Tool Analysis, Exception to Standardization, Selection and elimination of Tools
- 2.4** Understanding Scaling, Scaling for Teams, Scaling for Organization

Course Outcome Achieved:

CO1: Understand the basic concept and stakes of DevOps.

Activate Windows
Go to Settings to activate Windows.

Created Repository named DevOps_CiCd-Pipeline and pushed code to it : Github repository:

Bhavik-20 / DevOps_CiCd-Pipeline Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

master 1 branch 0 tags

buddy 38 26 commits

node_modules 27 22 minutes ago

vendor 38 8 minutes ago

DEVOPS IA2.docx Pushed yesterday

DevOps_Logo.jpg DevOps IA Code 4 days ago

DevOps_Logo.png DevOps IA Code 4 days ago

book.png DevOps IA Code 4 days ago

close.png DevOps IA Code 4 days ago

code.png DevOps IA Code 4 days ago

column.png DevOps IA Code 4 days ago

composer.json license added 43 minutes ago

composer.lock lock file added 1 hour ago

devops.css DevOps IA Code 4 days ago

About No description, website, or topics provided.

Releases No releases published Create a new release

Packages No packages published Publish your first package

Contributors 3

Bhavik-20 BhavikBhatt

Muskaan-Nandu

piyush-chavda

Deployed the website on github pages:

Pages

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

GitHub Pages

Your site is published at https://bhavik-20.github.io/DevOps_CiCd-Pipeline/

Source Your GitHub Pages site is currently being built from the master branch. [Learn more](#).

Branch: master / (root) Save

Theme Chooser Select a theme to publish your site with a Jekyll theme. [Learn more](#).

Choose a theme

Custom domain Custom domains allow you to serve your site from a domain other than [bhavik-20.github.io](#). [Learn more](#).

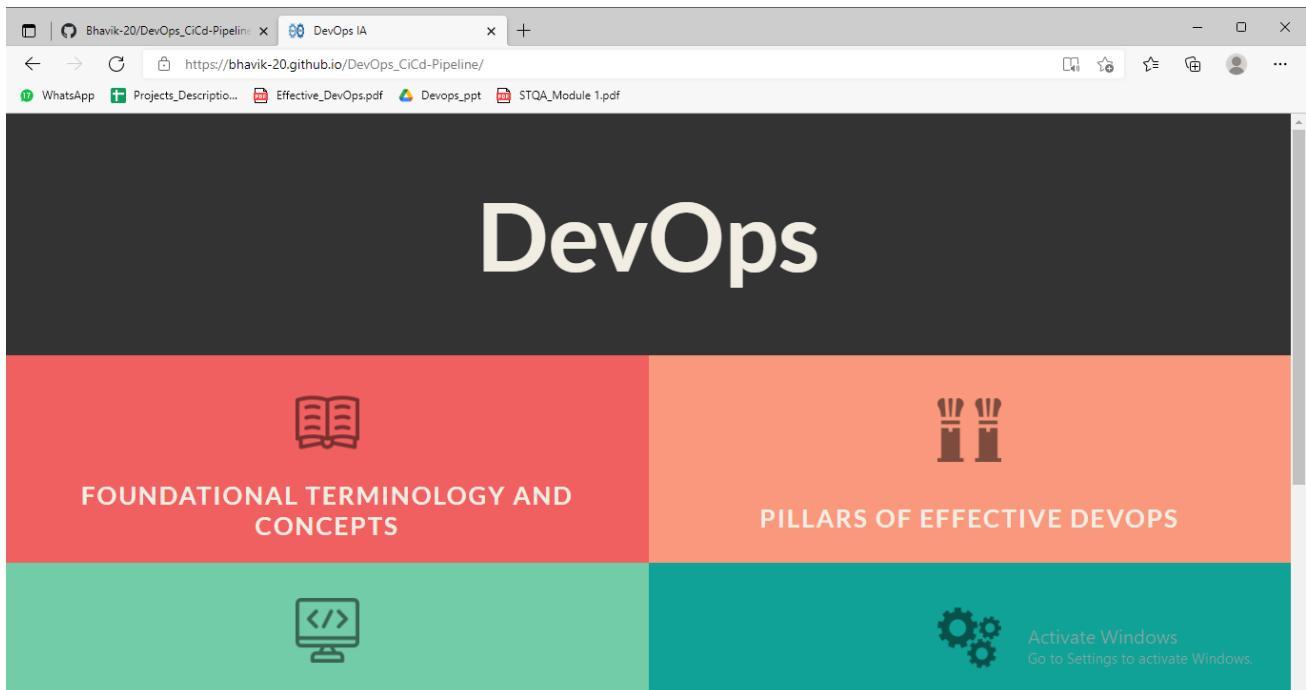
Save Remove

Enforce HTTPS Required for your site because you are using the default domain ([bhavik-20.github.io](#))

HTTPS provides a layer of encryption that prevents others from snooping on or tampering with traffic to your site. When HTTPS is enforced, your site will only be served over HTTPS. [Learn more](#).

Publish privately to people with read access to this repository

Deployed website:



4) PIPELINE CREATION

- Creating a new project and linking it with GitHub repository

A screenshot of the Buddy app interface. On the left, there's a sidebar with options like 'Projects', 'Variables, Keys & Assets', 'Integrations', 'Activity', 'People', 'Workspace Settings', 'Billing', and 'Docs & Support'. The main area is titled 'Create a new project'. It shows a 'GIT HOSTING PROVIDER' dropdown set to 'GitHub' with the subtext 'Build and deliver your GitHub repositories'. Below that is a 'REPOSITORY' input field containing 'Devops_'. At the bottom, there's a table with one row showing 'NAME' as 'DevOps_CiCd-Pipeline', 'LAST UPDATE' as '1 hour', and 'ORGANIZATION' as 'Personal'.

- Project Created

The screenshot shows the Buddyworks project dashboard for the 'DevOps_CiCd-Pipeline' project. The left sidebar includes sections for Pipelines, Code, Variables, Keys & Assets, Integrations, Activity, Project Team, Project Settings, Billing, and Docs & Support. The main area displays a large 'Automate PHP application' banner with a 'Add a new pipeline' button and a 'php' icon. At the bottom, there's a '#YML' alternative push option.

- Adding members to the pipeline

The screenshot shows the 'Project Team' management interface for the 'DevOps_CiCd-Pipeline' project. The left sidebar includes sections for Pipelines, Code, Variables, Keys & Assets, Integrations, Activity, Project Team, Project Settings, Billing, and Docs & Support. The main area shows a 'MANAGE PROJECT TEAM' table with columns for USER, ROLE, and ACCESS. It lists six team members: Bhavik Bhatt (Workspace Owner, No 2FA, Last seen: 37 minutes ago, Developer role, green checkmark), Labdh Jain (Invited - Not yet responded, Send a reminder?, + icon), Dhruv (No 2FA, Last seen: 23 hours ago, + icon), Muskaan Nandu (No 2FA, Last seen: 1 hour ago, + icon), Piyush Chavda (Invited - Not yet responded, Send a reminder?, + icon), and Kunj Gala (Invited - Not yet responded, Send a reminder?, + icon). A message icon is visible at the bottom right.

- Adding a pipeline in the project

The screenshot shows the 'Edit - PHP website Syntax Testing' page in the Buddy Platform. On the left, there's a sidebar with 'Project' and 'Code' sections, and buttons for 'Variables, Keys & Assets', 'Integrations', 'Activity', 'Project Team', 'Project Settings', 'Billing', and 'Docs & Support'. The main area is titled 'Pipeline: PHP website Syntax Testing' and has tabs for 'Runs', 'Actions', 'Filesystem', 'Variables', 'Analytics', 'Conditions', and 'Settings'. The 'Settings' tab is selected. It shows the pipeline name 'PHP website CI CD', trigger mode set to 'On push' (which is checked), and the branch set to 'master'. There's also a 'Target website URL' field with the value 'http://preview.com'.

Setting the trigger mode as “on push” to execute the pipeline after every commit on GitHub repository.

I. PRIMARY ACTION 1: SETUP PHASE: PHP ACTION

- Selecting PHP action

The screenshot shows the 'Add a new action - PHP website' page. The left sidebar is identical to the previous one. The main area is titled 'Add a new action to PHP website Syntax Testing' and has tabs for 'Actions' (which is selected) and 'Templates'. A search bar shows 'PHP'. Below it, there's a description: 'Load a Docker image with preinstalled PHP into a container and use it to run your PHP tasks'. A large 'PHP' icon with a gear inside is shown. To the right, there's a sidebar with 'Clone from another pipeline' and 'Edit pipeline settings' buttons. Under 'JUMP TO', there's a list of various deployment targets like 'Suggestions', 'Setup', 'Transfer', etc. At the bottom, there's a 'CODE QUALITY & REVIEW' section and a 'Code quality & review' button.

- Installing composer and all the dependencies

II. PRIMARY ACTION 2: BUILD PHASE

- The project is a PHP website and hence there are no dedicated commands to build the project into a deployable version. (like “npm run build” for React js)

III. PRIMARY ACTION 3: GULP

- Gulp action will compile the project assets and minify the code

Add a new action - PHP website X + https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/add?triggerTime=ON_EVERY_EXECUTION&afterActionId=941408

DevOps_CiCd-Pi... ▾ Manage actions - PHP website CI CD

Pipelines

Code

Variables, Keys & Assets

Integrations

Activity

Project Team

Project Settings

Billing Upgrade

Docs & Support

Add a new action to PHP website CI CD

Actions Templates

gulp Load a Docker image with preinstalled Gulp into a container and use it to run your Gulp tasks

Gulp Hey there, we can do more! Ping us if you want anything else. We can add a dedicated action to match your needs. Just send us a message

Clone from another pipeline JUMP TO

- Suggestions
- Setup
- Transfer
- DevOps
- Run commands in dedicated environment
- Build tools & task runners
- Static sites generators
- Download
- Deploy to IaaS
- Amazon Web Services
- Google Cloud Platform
- DigitalOcean
- Microsoft Azure
- Docker
- Kubernetes
- Android
- Delivery to version control
- Code quality & review
- Performance & app monitoring
- Uptime monitoring
- Notifications

https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/add/gulp?triggerTime=ON_EVERY_EXECUTION&afterActionId=941408

Edit action - PHP website CI CD X + https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/940458/edit

90% BB

DevOps_CiCd-Pi... ▾

Pipelines

Code

Variables, Keys & Assets

Integrations

Activity

Project Team

Project Settings

Billing Upgrade

Docs & Support

Execute: gulp

Run Environment Services Cache Variables Condition Action

BUILD COMMANDS

Fetch dependencies and build/test your project on our server. These commands are executed in an isolated Docker container in the context of your repository.

Environment: node 6 [Change]

SH BASH Fullscreen

npm install gulp

OPTIONS

Exit code handling

If any command throws an error don't execute next commands

Cancel Save this action

How to use Environment Variables Remove this action

BB

https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/940458/edit

IV. PRIMARY ACTION 4: TESTING PHASE: PHP ACTION

- Executing test on index.php file to verify the syntax of the code

The screenshot shows a web browser window titled 'Add a new action - PHP website'. The URL is <https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/add>. The main content area is titled 'Add a new action to PHP website Syntax Testing'. It features two tabs: 'Actions' (selected) and 'Templates'. Below these tabs is a search bar containing the text 'PHP'. A central icon represents a Docker container with PHP inside, with the text 'Load a Docker image with preinstalled PHP into a container and use it to run your PHP tasks'. To the right of the main content is a sidebar titled 'Edit pipeline settings' with a 'JUMP TO' section containing various pipeline types like 'Suggestions', 'Setup', 'Transfer', etc.

The screenshot shows a web browser window titled 'Edit action - PHP website CI CD'. The URL is <https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/940455/edit>. The main content area is titled 'Execute: php -l index.php'. It features a toolbar with icons for Run, Environment, Services, Cache, Variables, Condition, and Action. Below the toolbar is a 'BUILD COMMANDS' section with the text 'Fetch dependencies and build/test your project on our server. These commands are executed in an isolated Docker container in the context of your repository.' and 'Environment: php 7.4 [Change]'. A terminal window shows the command 'php -l index.php'. At the bottom of the page are 'OPTIONS' and 'Exit code handling' sections, and a footer with 'Cancel' and 'Save this action' buttons.

V. PRIMARY ACTION 5: DEPLOY PHASE: GIT PUSH ACTION

The screenshot shows the 'Add a new action to PHP website CI CD' screen. On the left, there's a sidebar with project settings like Pipelines, Code, Variables, Keys & Assets, Integrations, Activity, Project Team, Project Settings, Billing, and Docs & Support. The main area has tabs for 'Actions' (selected) and 'Templates'. A search bar contains 'git push'. Below it is a card for 'Git Push' with the description 'Push files from your repository to another Git repository'. To the right is a sidebar titled 'Clone from another pipeline' with a 'BB' icon, containing a list of deployment targets such as Suggestions, Setup, Transfer, DevOps, Run commands in dedicated environment, Build tools & task runners, Static sites generators, Download, Deploy to IaaS, Amazon Web Services, Google Cloud Platform, DigitalOcean, Microsoft Azure, Docker, Kubernetes, Android, Delivery to version control, Code quality & review, Performance & app monitoring, and a 'How to use Environment Variables' link.

- Specifying the repository URL and Login credentials for successful deployment to git repository

The screenshot shows the 'Edit action - PHP website CI CD' screen for the 'git push' action. It has tabs for 'Setup' (selected), 'Condition', and 'Action'. The main area is titled 'Push to https://github.com/Bhavik-20/DevOps_CiCd-Pip...' and includes fields for 'REPOSITORY', 'URL' (set to https://github.com/Bhavik-20/DevOps_CiCd-Pipeline), 'Authentication mode' (set to HTTP), 'Login' (Bhavik-20), and 'Password' (redacted). A 'Remove this action' link is visible in the top right. The left sidebar is identical to the previous screenshot.

- Adding the “commit message” and configuring settings for the action

WHAT TO PUSH

Off On Commit changes made by previous actions

Commit message

```
$BUDDY_EXECUTION_ID
-> Deployed from BUDDY PIPELINE
```

Off On Push created revision to a specific branch

Off On Tag and push created revision

OPTIONS

Force push
 Push all tags
 Use custom .gitignore

Cancel Save this action

- Here we have set a condition for executing this action. It will run only once a day at 11:00 pm from Monday to Sunday.

Setup Condition Action

Define a condition when this action should be triggered. It can depend on changes in the repository, or an ENV VAR value. [Learn more about trigger conditions.](#)

Run only on specific day and/or hour

Select what days and hours the pipeline can be triggered. The selected time is specified in the Europe/Warsaw timezone ([change](#))

Select days when the pipeline should be triggered

<input checked="" type="checkbox"/>						
Mon	Tue	Wed	Thu	Fri	Sat	Sun

Select hours when the pipeline should be triggered

1	2	3	4	5	6	7	8	9	10	11	12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
13	14	15	16	17	18	19	20	21	22	23	24

Cancel Save this action

VI. PRIMARY ACTION 6: NOTIFY DEVOPS TEAM: EMAIL

- Notifying the team on successful execution of pipeline by sending an email to all members.

The screenshot shows the 'Add a new action - PHP website' screen in the Buddy CI/CD pipeline interface. The left sidebar includes 'Project' (selected), 'Code', 'Variables, Keys & Assets', 'Integrations', 'Activity', 'Project Team', 'Project Settings', 'Billing', and 'Docs & Support'. The main area is titled 'Add a new action to PHP website CI CD' and shows two tabs: 'Actions' (selected) and 'Templates'. A search bar contains 'Email'. Below it, a card says 'Notify your team with an email message' with an 'Email' icon. A message below reads: 'Hey there, we can do more! Ping us if you want anything else. We can add a dedicated action to match your needs. Just send us a message.' On the right, a sidebar lists 'Clone from another pipeline' and 'JUMP TO' sections with various options like 'Suggestions', 'Setup', 'Transfer', 'DevOps', etc.

The screenshot shows the 'Email - Add a new action - PHP' screen in the Buddy CI/CD pipeline interface. The left sidebar is identical to the previous screen. The main area is titled 'Send email notification' and shows five tabs: 'Setup' (selected), 'Attachments', 'Variables', 'Condition', and 'Action'. The 'From' field is set to 'BUDDY CI CD PIPELINE'. The 'Subject' field contains '\$BUDDY_PIPELINE_NAME execution #' followed by the pipeline ID. The 'Email body' field contains the message 'Your Pipeline has been executed successfully.'. The 'Type' dropdown is set to 'Plain text'. The 'Recipients' field contains a list of email addresses: 'bhavik.bhatt@somalya.edu', 'muskanna.n@somalya.edu', 'piyush.chavda@somalya.edu', 'kunj.gala@somalya.edu', 'dhruv.doshi@somalya.edu', and 'labhild.jain@somalya.edu'. A button 'Add me to the list' is visible next to the recipient list. A 'How to use Environment Variables' link is also present.

VII. ACTION TO RUN ON FAILURE: EMAIL NOTIFICATION

- Configuring action to run on failure

The screenshot shows the 'Actions Run on Failure' section of a pipeline configuration. It includes a button to 'Add the first on failed action'. Below it is the 'Actions Run on Back to Normal' section with a similar 'Add the first on back to normal action' button. At the bottom, there's a note about actions running on warning and a link to the URL: https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/add?triggerTime=ON_FAILURE.

- Selecting Email notification

The screenshot shows the 'Add a new action to PHP website Syntax Testing' dialog. Under the 'Actions' tab, the 'Email' action is selected. A callout box highlights the 'Email' icon and the text 'Notify your team with an email message'. The right sidebar lists various 'Jump To' options, and the URL at the bottom is: https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/add/email?triggerTime=ON_FAILURE.

- Setting up the Email notification

From: Buddy CI CD

Subject: \$BUDDY_PIPELINE_NAME execution #\$BUDDY_EXECUTION_ID

Email body: Something Went Wrong with "PHP website CI CD" pipeline.

Type: Plain text

Recipients: bhavik.bhatt@somaiya.edu, muskaan.n@somaiya.edu, piyush.chavda@somaiya.edu, labdhijiain@somaiya.edu, dhruv.doshi@somaiya.edu, kunj.gala@somaiya.edu

Customizing email body and Subject as per needed.
Recipients includes all the members of the teams.

- Testing the action

Email body: Something Went Wrong with "PHP website CI CD" pipeline.

Type: Plain text

Recipients: bhavik.bhatt@somaiya.edu, muskaan.n@somaiya.edu, piyush.chavda@somaiya.edu, labdhijiain@somaiya.edu, dhruv.doshi@somaiya.edu, kunj.gala@somaiya.edu

Cancel Test action Save this action

Edit action - PHP website CI CD

https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/action/940457/edit

DevOps_CIC... ▾

BHAVIKBHATT / DEVOPS_CICD-PIPELINE

Manage actions - PHP website CI CD

How to use Environment Variables BB

Remove this action

Project Pipelines

Code

Variables, Keys & Assets

Integrations

Activity

Project Team

Project Settings

Billing Upgrade

Docs & Support

Send Email notification

TEST LOG

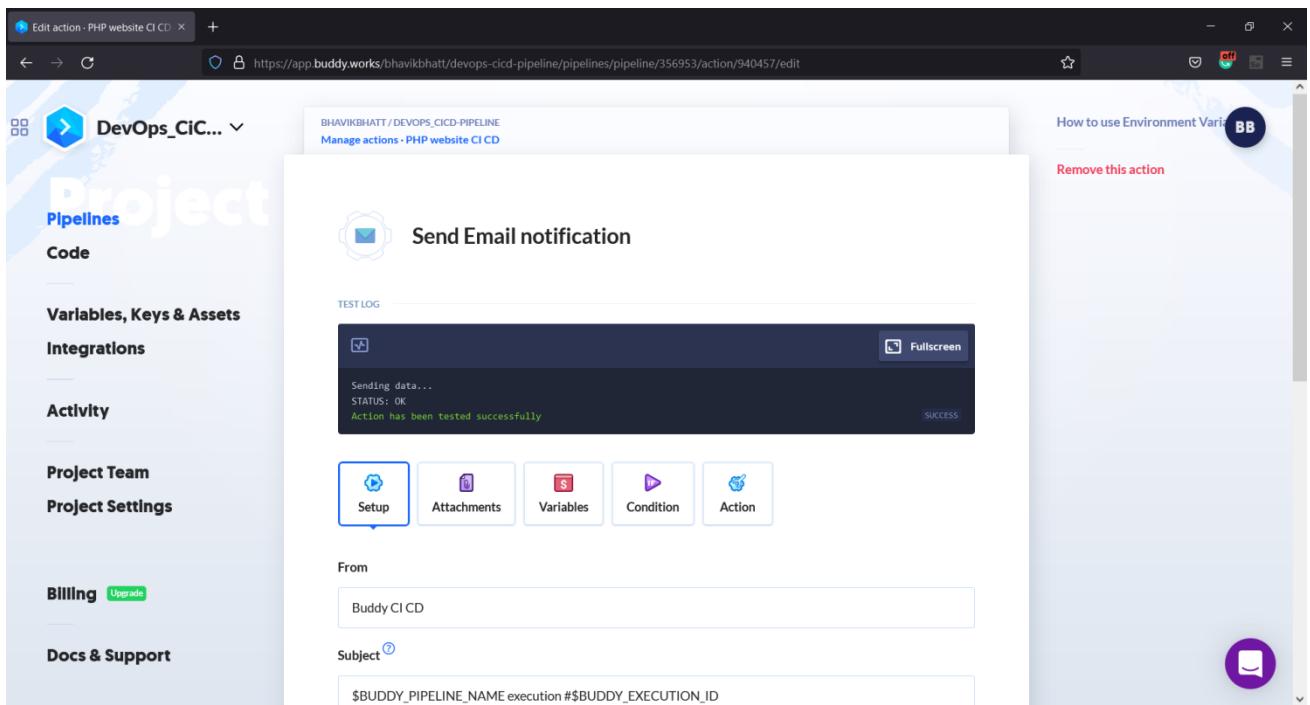
SUCCESS

Sending data... STATUS: OK Action has been tested successfully

Setup Attachments Variables Condition Action

From Buddy CI CD

Subject \$BUDDY_PIPELINE_NAME execution #\$BUDDY_EXECUTION_ID



Edit action - PHP website CI CD

PHP website CI CD execution #2

https://mail.google.com/mail/u/0/#inbox/

Gmail

Search all conversations

1 of 5,222

Inbox 1

Starred

Snoozed

Sent

Drafts 1

Notes

X

More

PHP website CI CD execution #2 External Inbox

Buddy CI CD <no-reply@buddy.works> to dhruv.doshi, muskaan.n, labdhijiain, piyush.chavda, kunj.gala, me 11:38 AM (0 minutes ago)

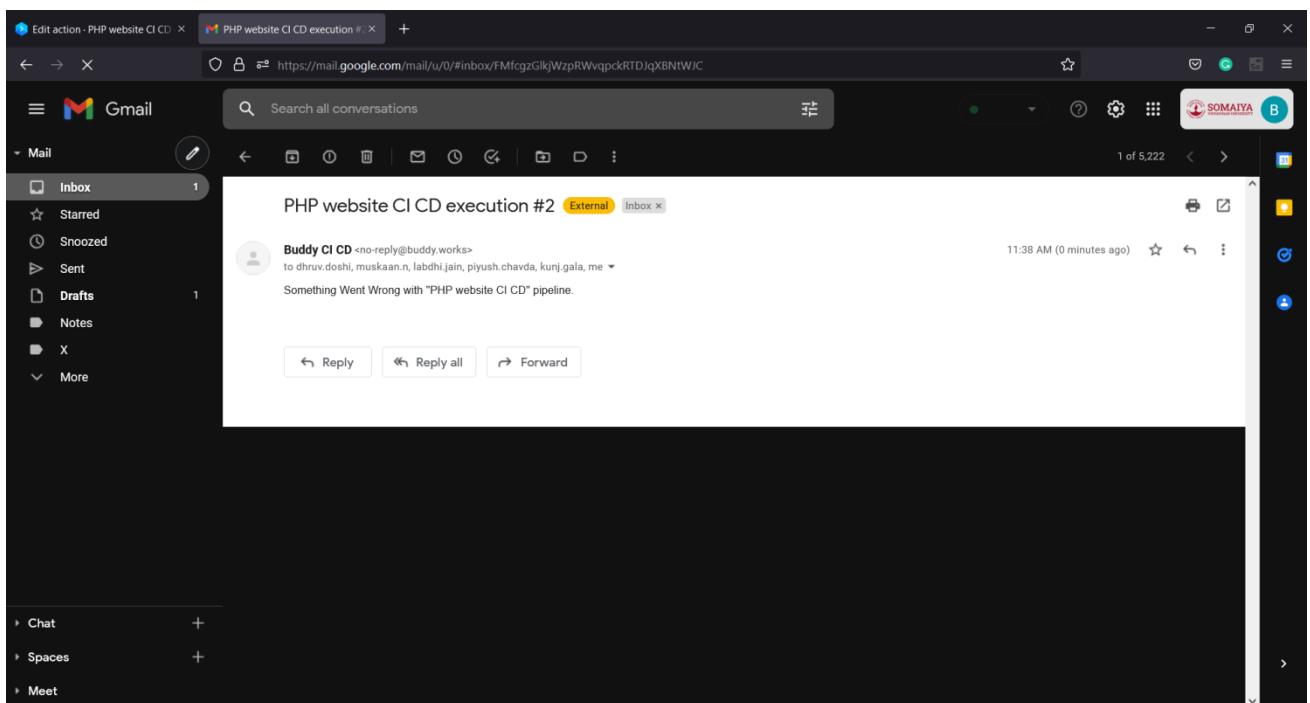
Something Went Wrong with "PHP website CI CD" pipeline.

Reply Reply all Forward

Chat

Spaces

Meet



5) PIPELINE EXECUTION

- Final Pipeline

The screenshot shows the Buddy pipeline editor interface. On the left, there's a sidebar with project navigation: Pipelines, Code, Variables, Keys & Assets, Integrations, Activity, Project Team, and Project Settings. Below these are Billing (Upgrade), Docs & Support, and a link to the pipeline's URL. The main area displays a sequence of pipeline actions:

- Execute: # vendor/composer/phpunit (On)
- Execute: gulp (On)
- Execute: php -l index.php (On)
- Push to https://github.com/Bhavik-20/DevOps_CiCd-Pipeline (On)
- Send Email notification (On)

Below the main actions, there's a section titled "ACTIONS RUN ON FAILURE" which contains a single action: "Send Email notification" (On).

- Running the pipeline and writing a comment for the current execution of the pipeline

The screenshot shows the Buddy pipeline run page. The left sidebar is identical to the pipeline editor. The main area has a "REVISION" section showing a log entry: "#25173a9: 38-> Deployed from BUDDY PIPELINE" with a "Change commit..." link. Below this is a "COMMENT" section with a text input field containing "Final pipeline execution". Underneath the comment field are "OPTIONS": "Clear cache before running (Not recommended)" (unchecked) and "+ Pass variables" (checked). There's also a "Priority" dropdown set to "Normal". At the bottom right is a large blue "Run now" button.



Prepare Environment

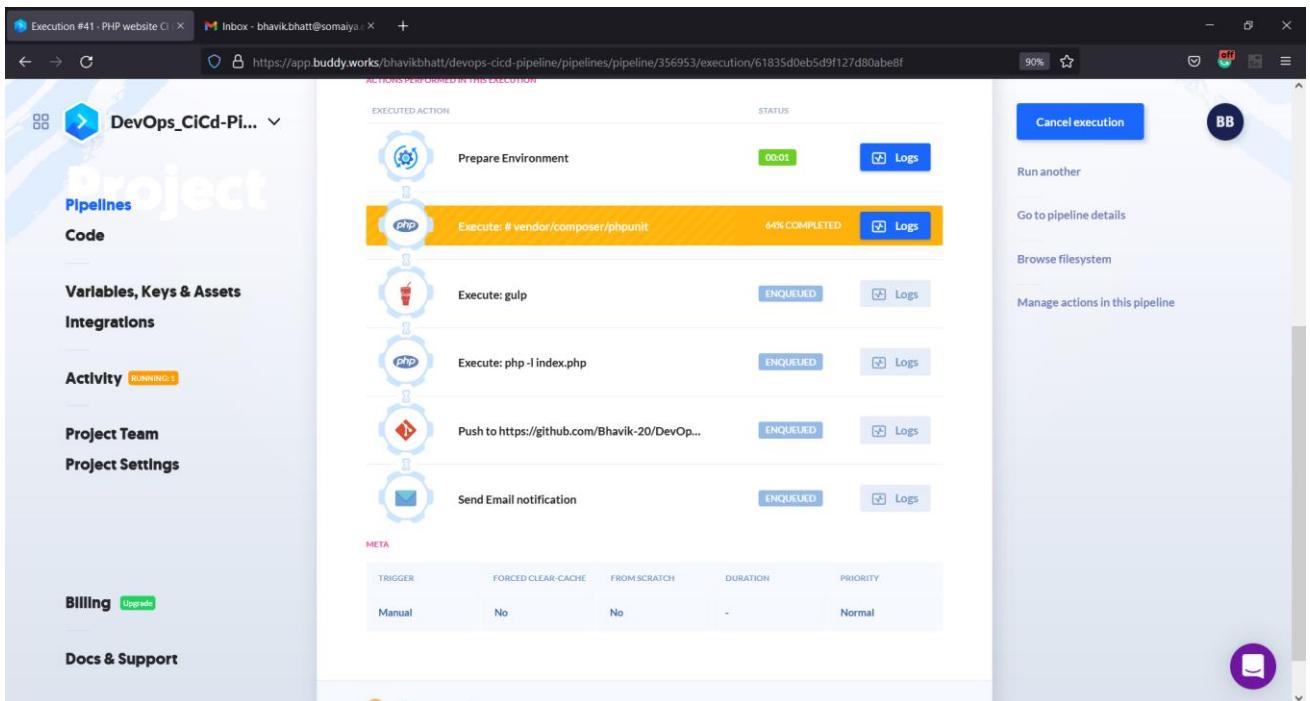
00:01

Logs

✓ Fullscreen

```
/c631608587cb4e4b2152cca7d7bf308e/w/32/32/AVATAR.png
BUDDY_INVOKER_EMAIL=bhavik.bhatt@somaiya.edu
BUDDY_EXECUTION_CHANGELOG_CHANGED=
BUDDY_EXECUTION_REVISION_COMMITTER_EMAIL=buddy@buddy.works
BUDDY_WORKSPACE_URL=https://app.buddy.works/bhavikbhatt
BUDDY_EXECUTION_START_DATE=2021-11-04T04:09:50.875Z
BUDDY_EXECUTION_CLEAR_CACHE=false
BUDDY_EXECUTION_REVISION_MESSAGE=38
-> Deployed from BUDDY PIPELINE
Preparing execution environment finished
```

SUCCESS



The screenshot shows the Buddy pipeline interface for a project named "DevOps_CiCd-Pi...". The left sidebar includes sections for Pipelines, Code, Variables, Keys & Assets, Integrations, Activity (1 running), Project Team, and Project Settings. The Billing section shows an "Upgrade" button. The main area displays the pipeline steps:

Action	Status	Logs
Prepare Environment	00:01	Logs
Execute: # vendor/composer/phpunit	44% COMPLETED	Logs
Execute: gulp	ENQUEUED	Logs
Execute: php -l index.php	ENQUEUED	Logs
Push to https://github.com/Bhavik-20/DevOp...	ENQUEUED	Logs
Send Email notification	ENQUEUED	Logs

On the right, there are buttons for "Cancel execution", "Run another", "Go to pipeline details", "Browse filesystem", and "Manage actions in this pipeline". A purple circular icon with a white letter "B" is also present.

 Execute: # vendor/composer/phpunit 00:04 Logs

Raw logs Fullscreen

```
Loading assets
composer install
Installing dependencies from lock file (including require-dev)
Verifying lock file contents can be installed on current platform.
Nothing to install, update or remove
Generating autoload files
Build finished successfully!
```

EXECUTE SUCCESS

Edit this action

Execution #41 - PHP website CI | ✅ Inbox - bhavik.bhatt@somaiya... + https://app.buddy.works/bhavik.bhatt/devops-ci-cd-pipeline/pipelines/pipeline/356953/execution/61835d0eb5d9f127d89abe8f 90% off ⚡

DevOps_CiCd-Pi... ▾

Pipelines

Code

Variables, Keys & Assets

Integrations

Activity RUNNING 1

Project Team

Project Settings

Billing Upgrade

Docs & Support

ACTIONS PERFORMED IN THIS EXECUTION

EXECUTED ACTION	STATUS	Logs
Prepare Environment	00:01	Logs
Execute: # vendor/composer/phpunit	00:04	Logs
Execute: gulp	36% COMPLETED	Logs
Execute: php -l index.php	ENQUEUED	Logs
Push to https://github.com/Bhavik-20/DevOp...	ENQUEUED	Logs
Send Email notification	ENQUEUED	Logs

META

TRIGGER	FORCED CLEAR-CACHE	FROM SCRATCH	DURATION	PRIORITY
Manual	No	No	-	Normal

Cancel execution BB Run another Go to pipeline details Browse filesystem Manage actions in this pipeline

💬

 Execute: gulp 00:24 Logs

Raw logs Fullscreen

```
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@^1.2.7 (node_modules/chokidar/node_modules/fsevents):  
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os": "darwin", "arch": "any"} (current: {"os": "linux", "arch": "x64"})  
npm WARN enoent ENOENT: no such file or directory, open '/buddy/devops-cicd-pipeline/package.json'  
npm WARN devops-cicd-pipeline No description  
npm WARN devops-cicd-pipeline No repository field.  
npm WARN devops-cicd-pipeline No README data  
npm WARN devops-cicd-pipeline No license field.  
Build finished successfully!
```

SUCCESS

Edit this action

Execution #41 - PHP website CI × Inbox - bhavikbhatt@somaiya... + https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/execution/61835d0eb5d9f127d80abe8f 90% BB

Actions performed in this execution

EXECUTED ACTION	STATUS	Logs
Prepare Environment	00:01	Logs
Execute: # vendor/composer/phpunit	00:04	Logs
Execute: gulp	00:24	Logs
Execute: php -l index.php	WORKING	Logs
Push to https://github.com/Bhavik-20/DevOp...	ENQUEUED	Logs
Send Email notification	ENQUEUED	Logs

Cancel execution Run another Go to pipeline details Browse filesystem Manage actions in this pipeline

DevOps_CICD-Pipeline Pipelines Code Variables, Keys & Assets Integrations Activity RUNNING 1 Project Team Project Settings Billing Upgrade Docs & Support

 Execute: php -l index.php 00:04 Logs

Raw logs Fullscreen

```
Loading assets
php -l index.php
No syntax errors detected in index.php
Build finished successfully!
```

EXECUTE SUCCESS

Edit this action

 Send Email notification 00:01 Logs

Raw logs Fullscreen

```
Sending data...
STATUS: OK
Successfully completed!
```

Edit this action

Execution #41 - PHP website CI × | Inbox (1) - bhavik.bhatt@soma × + https://app.buddy.works/bhavikbhatt/devops-cicd-pipeline/pipelines/pipeline/356953/execution/61835d0eb5d9f127d80abe8f

Actions performed in this execution

EXECUTED ACTION	STATUS	Logs
Prepare Environment	00:01	Logs
Execute: # vendor/composer/phpunit	00:04	Logs
Execute: gulp	00:24	Logs
Execute: php -l index.php	00:04	Logs
Push to https://github.com/Bhavik-20/DevOp...	SKIPPED	Logs
Send Email notification	00:01	Logs

Run another BB

Go to pipeline details

Browse filesystem

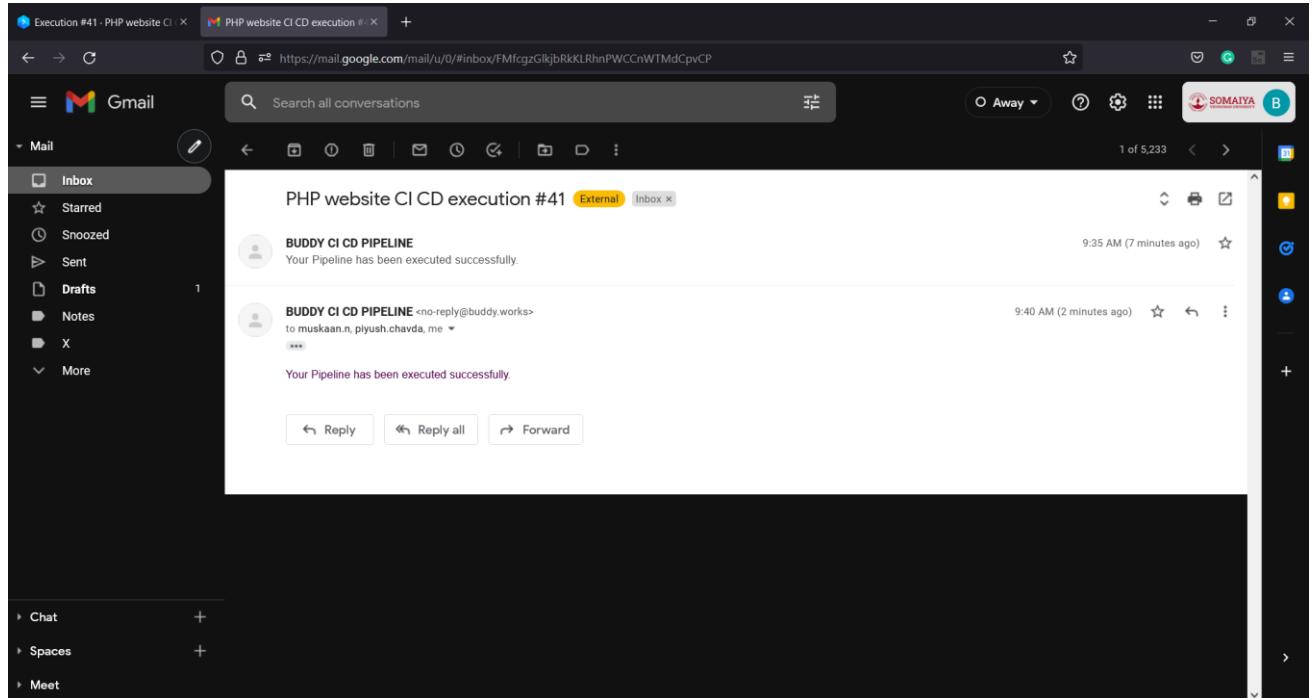
Manage actions in this pipeline

TRIGGER FORCED CLEAR-CACHE FROM SCRATCH DURATION PRIORITY

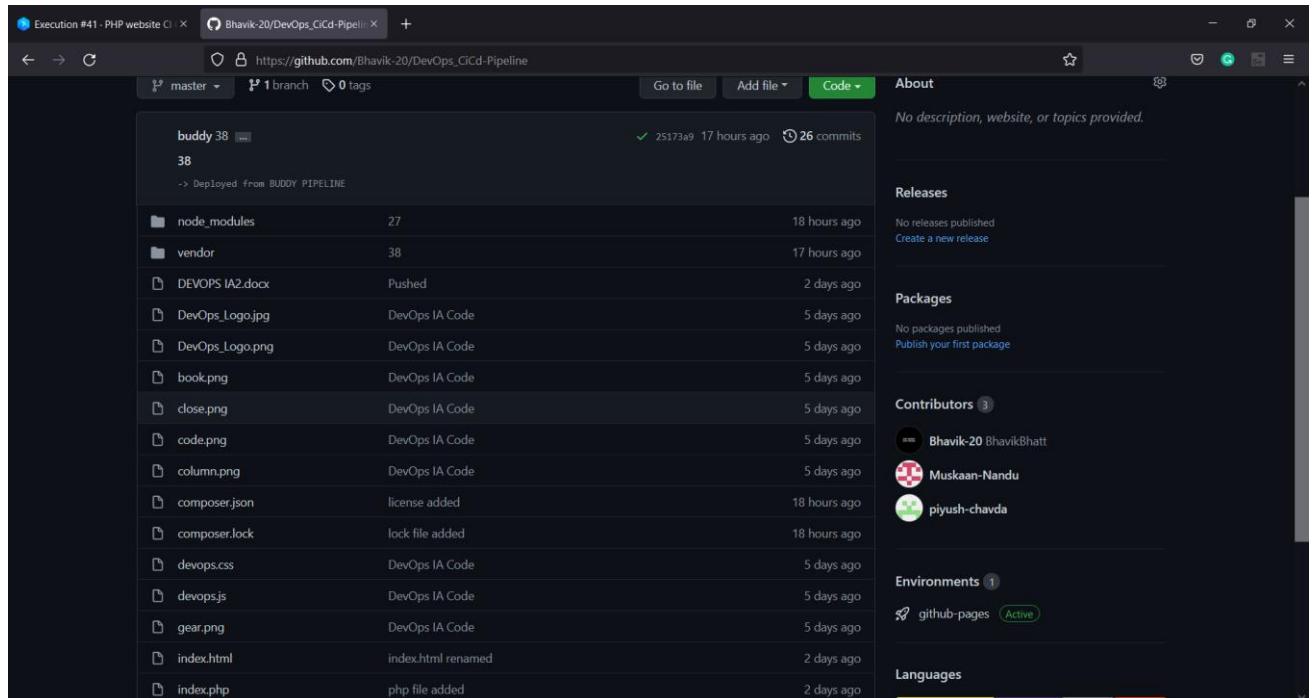
Manual No No 00:35 Normal

Docs & Support

- All actions in the pipeline have been executed successfully except the push to git command as it does not meet the condition and will be executed once a day only.
- Email received on successful execution of the pipeline



- Changes deployed to git repository



6) CONCLUSION

In this project, we have created a simple PHP application and have built a CI/CD pipeline using Buddy which is self-hosted continuous integration and delivery software and have used git and GitHub for source code management and version control, PHP command lines for testing of the application and GitHub Pages for deployment of the website. Whenever there is a new commit on GitHub, this pipeline will fetch the code, install the necessary dependencies, build and test the application again and deploy the changes on GitHub pages seamlessly