

Rules			Git Workflows					Types of guidelines		
			GitHub Flow	Feature Branch	GitFlow	Trunk-based Development	Cactus Model	Key	Label	Description
						REC		REQ	Requirement	Guideline enforced by the workflow, non-optional (MUST, SHALL)
								REC	Recommendation	Suggested guideline that if ignored does not affect the main purpose of the workflow, optional (SHOULD)
								PRO	Prohibition	Guideline that is explicitly forbidden (MUST NOT, SHALL NOT)
1. Setup [1]	a) Repository creation	A) Clone				REC				
		B) GitHub-style Fork								
	b) Branch role assignment [3]	i. Main [4]	A) Master	✓	✓	✓	✓	✓		
			B) Develop			✓		✓		
			C) Feature							
			D) Topic							
			E) Production							
			F) Release					✓		
		ii. Integration	A) Master			✓		✓		
			B) Develop			✓		✓		
			C) Feature					✓		
			D) Topic					✓		
			E) Production					✓		
			F) Release					✓		
			G) Fix					✓		
			H) HotFix					✓		
			I) BugFix					✓		
		iii. Change	A) Master		✓		✓	✓		
			B) Develop	✓	✓		✓	✓		
			C) Feature	✓	✓	✓	✓	✓		
			D) Topic	✓	✓	✓	✓	✓		
			E) Production	✓	✓		✓	✓		
			F) Release	✓	✓		✓	✓		
		iv. Release	G) Fix	✓	✓		✓	✓		
			H) HotFix	✓	✓		✓	✓		
			I) BugFix	✓	✓		✓	✓		
			A) Master	✓		✓	✓	✓		
			B) Develop							
			C) Feature							
		v. Fix	D) Topic							
			E) Production							
			F) Release							
			G) Fix							
			H) HotFix							
			I) BugFix							
	c) Development environment	i. Main	A) Central repository			REQ				
			B) Local repository							
			C) Forked repository							
		ii. Integration	A) Central repository			REQ				
			B) Local repository							
			C) Forked repository							
		iii. Change	A) Central repository							
			B) Local repository	REC	REQ	REC	REC	REQ		
			C) Forked repository							
		iv. Release	A) Central repository							
			B) Local repository							
			C) Forked repository							
		v. Fix	A) Central repository							
			B) Local repository	REC						
			C) Forked repository							
	ii. Integration [7]	A) To work on a new feature								
		B) To create a fix								
		C) To prepare a release								
		D) To integrate work			REQ					

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a) Code integration event [15]			H) After tests passing in Production								
			I) To update the target branch								
			J) As frequently as possible					REC			
		ii. Integration	A) End of working day								
			B) Every <n> weeks								
			C) When work completed								
			D) After rebase								
			E) After code review completed								
			F) After tests passing in Dev Env.								
			G) After tests passing in Test/QA/Stage								
			H) After tests passing in Production								
			I) To update the target branch								
			J) As frequently as possible								
		iii. Change	A) End of working day								
			B) Every <n> weeks								
			C) When work completed			REQ					
			D) After rebase								
			E) After complete code review	REC	REC		REQ	REC			
			F) After tests passing in Dev Env.	REC			REQ				
			G) After tests passing in Test/QA/Stage								
			H) After tests passing in Production	REC							
			I) To update the target branch								
			J) As frequently as possible	REQ			REC				
		iv. Release	A) End of working day								
			B) Every <n> weeks								
			C) When work completed								
			D) After rebase								
			E) After code review completed			REQ					
			F) After tests passing in Dev Env.								
			G) After tests passing in Test/QA/Stage								
			H) After tests passing in Production								
		v. Fix	I) To update the target branch								
			J) As frequently as possible								
			A) End of working day								
			B) Every <n> weeks								
			C) When work completed			REQ					
			D) After rebase								
			E) After code review completed	REC							
			F) After tests passing in Dev Env.	REC							
			G) After tests passing in Test/QA/Stage								
			H) After tests passing in Production	REC							
			I) To update the target branch								
			J) As frequently as possible								
b) Main integrated into	ii. Integration	A) Upstream									
			B) Downstream								
		A) Upstream					REC				
			B) Downstream					REQ			
	iv. Release	A) Upstream									
			B) Downstream								
	v. Fix	A) Upstream									
			B) Downstream								
c) Integration integrated into [16]	i. Main	A) Upstream									
			B) Downstream								
	iii. Change	A) Upstream									
			B) Downstream								
	iv. Release	A) Upstream									
			B) Downstream								
	v. Fix	A) Upstream									
			B) Downstream								
	i. Main	A) Upstream	REQ	REQ			REQ	REQ			
			B) Downstream								
	ii. Integration	A) Upstream			REQ						
			B) Downstream								

Rules				Git Workflows			
				GitHub Flow	Feature Branch	GitFlow	Trunk-based Development
	i) Code review approach before integrating from [22]	iii. Change	A) Staged				
			B) At central repository				
			C) Through pull/merge request	REC	REC		
		iv. Release	A) Staged				
			B) At central repository				
			C) Through pull/merge request				
		v. Fix	A) Staged				
			B) At central repository				
			C) Through pull/merge request	REC			
4. Development conventions [23]	a) Commit message guidelines [24]	A) GitHub convention					
	b) Naming convention [25]	i. Main	A) semantic versioning (semver)				
		ii. Integration	A) semantic versioning (semver)				
			B) develop		REQ		
		iii. Change	A) semantic versioning (semver)				
		iv. Release	A) semantic versioning (semver)		REC		
			B) release-*		REQ		
		v. Fix	A) semantic versioning (semver)		REC		
	B) hotfix-* bugfix-* fix-*			REQ			
	c) Tags used [26]	i. Main			REQ		
		ii. Integration					
		iii. Change					
		iv. Release					REC
		v. Fix					
	d) Version bump used [27]				REQ		

Types of guidelines		
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- [1] What steps are needed to prepare the project for the development process from the contributor point of view? (e.g., how to setup the initial working copy to start contributing to the project?)
- [2] What mechanism (clone or GitHub fork) is used to create the working copy for a contributor to the project?
- [3] In the workflow, which branch assumes the role of each these types of branches?
- [4] Contains all the changes associated with the last stable release (other names: Master, Trunk)
- [5] Which conventions are followed to decide on how branches should be used to align with the conventions, requirements and objectives of the development project? (e.g., what are the types of branches used along the development process?)
- [6] When a contributor should create a new branch?
- [7] Allows the integration of multiple changes that are not yet ready to be released (other names: Develop)
- [8] All work associated with the development of a new feature (other names: Feature, topic)
- [9] Once the changes are completed, tested and integrated they can be included in this branch, which contains code that is ready for production (other names: Production)
- [10] Include development work to correct detected bugs and other emergency fixes (other names: HotFix, BugFix)
- [11] From which branch the contributors should branch off?
- [12] Should the branch be at all times ready for production (i.e., containing only code that compiles, with all tests passing, and fully integrated)?
- [13] Under what condition(s) should the branch be removed?
- [14] What approach or mechanism is followed to merge branches back? (e.g., what triggers a merge operation in the development process and which branches participate in it?)
- [15] At which point a branch should be merged back (e.g., when the work is ready for production, when a rebase has been applied, when the work in the feature is completed, every <n> number of weeks)?
- [16] Which branch should a Working branch be merged back to?
- [17] Which branch should a Change branch be merged back to?
- [18] Which branch should a Release branch be merged back to?

[19] Which branch should a Fix branch be merged back to?

[20] What mechanism (e.g., fast-forward merge, non-fast-forward merge, rebase, cherry-pick, fetch with rebase and merge, fetch and merge) should be used for merging a branch back?

[21] How changes that are intended to be merged should be pushed to the remote repository (e.g., with force option, with force-with-lease option, without options)?

[22] Should pull requests be used before merging back a branch?

[23] What additional guidelines are requested from contributors to the development project that are not specifically related to any of the previous categories? (e.g., what naming conventions are followed for the final release of the software product?)

[24] Which naming convention (e.g., GitHub or other) should be followed for commit messages?

[25] Which naming convention should be followed for a branch?

[26] Are tags used to identify a branch?

[27] Is version bump used to mark the creation of a new version?