**Backend:**

# Routes

# This file defines all application routes (Higher priority routes first)

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# An example controller showing a sample home page

GET / controllers.HomeController.index

# Authorship

GET /author/:name controllers.AuthorController.getPapers(name: String)

GET /collaborator/:name controllers.AuthorController.getCollaborators(name: String)

GET /path/:source/:destination controllers.AuthorController.getPath(source: String, destination: String)

#Find Expert by keyword

GET /expertByKeyword/:keyword controllers.FindExpertByKeyWordController.getExpert(keyword: String)

#Find Team by keyword

GET /teamByKeyword/:keyword controllers.FindExpertByKeyWordController.getTeam(keyword: String)

#Find Network by keyword

GET /networkByKeyword/:keyword controllers.FindExpertByKeyWordController.getNetwork(keyword: String)

#Find topics by channel

GET /topicsByChannel/:channel/:year controllers.FindTopicsByChannelController.getTopics(channel: String,year: String)

# Find Papers by Author name

GET /authorName/:name controllers.FindPapersbyAuthornameController.getPapersYear(name: String, from, to)

# Find Authors by Journal name

GET /journalName/:name controllers.JournalHistogramController.getJournalAuthors(name: String)

#Reference

GET /reference/:name controllers.PaperController.getPapers(name:String)

#Publication

POST /paper controllers.PaperController.createPaper()

#Follow

GET /following/news/:name controllers.FollowController.getNews(name: String)

POST /follow controllers.FollowController.postFollowship()

POST /unfollow controllers.FollowController.postUnfollowship()

GET /follower/:name controllers.FollowController.getAllFollowers(name: String)

GET /following/:name controllers.FollowController.getAllFollowings(name: String)

# Map static resources from the /public folder to the /assets URL path

GET /assets/\*file controllers.Assets.versioned(path="/public", file: Asset)

GET /showKnowledgeCard/:title controllers.ShowKnowledgeCardController.getCard(title: String)

GET /showAuthorCard/:name controllers.ShowAuthorCardController.getCard(name: String)

GET /ResearcherByKeyword/:keyword/:authorName controllers.FindResearcherByKeywordController.getResearcher(keyword: String,authorName: String)

POST /loginResult controllers.UserLoginController.createUser()

POST /userProfile controllers.UserProfileController.setProfile()

GET /showAuthorCard/:username controllers.ShowAuthorCardController.getCard(username:String)

GET /stats/:name controllers.FollowersStatisticsController.getStats(name: String)

GET /Collaboration/:name controllers.FollowersStatisticsController.getCollaboration(name: String)

###### ADVANCE REQ STARTS HERE #######

GET /simpleCategories/:startYear/:endYear controllers.PaperCategoriesController.showCategories(startYear: String, endYear: String)

GET /multiParamsCategories/:startYear/:endYear/:channels/:keywords controllers.PaperCategoriesController.multiParamsCategories(startYear: String, endYear: String,channels:String, keywords:String)

# Adv 1

GET /evolution/:channel/:startYear/:endYear controllers.EvolutionController.getTopics(channel: String,startYear: Integer, endYear: Integer)

# Adv 12

GET /map/author/:country/:keyword controllers.MapController.getAuthorLocations(country: String, keyword: String)

# Adv 13

GET /map/paper/:conference/:startYear/:endYear controllers.MapController.getPaperLocations(conference: String, startYear: Integer, endYear: Integer)

# Adv 9&10

GET /top20/ controllers.FollowersStatisticsController.getTop20Papers()

GET /top20years/:startYear/:endYear controllers.FollowersStatisticsController.getTop20PapersWithYear(startYear: String, endYear: String)

# Adv 14&15

GET /recommend/:keyword/:username controllers.RecommendController.getRecommend(keyword: String, username: String)

# Adv 8

GET /getKrelated/:startYear/:endYear controllers.FollowersStatisticsController.getKRelatedPapers(startYear: String, endYear: Integer)

**Front end:**

# Routes

# This file defines all application routes (Higher priority routes first)

# ~~~~

# An example controller showing a sample home page

GET / controllers.HomeController.index

GET /logout controllers.HomeController.logout

# Authorship

GET /author/:name controllers.AuthorController.getPapers(name: String)

GET /collaborator/ controllers.AuthorController.collaboratorForm()

POST /collaborator/ controllers.AuthorController.getCollaborators()

GET /path/:source/:destination controllers.AuthorController.getPath(source: String, destination: String)

GET /path/form controllers.AuthorController.getPathForm()

# Find Papers by Author name

GET /authorName controllers.AuthorController.publicationPerYear

POST /authorName controllers.AuthorController.getPapersYear

# Find Author by Journal name

GET /journalName controllers.AuthorController.journalAuthors

POST /journalName controllers.AuthorController.getJournalAuthors

# Map static resources from the /public folder to the /assets URL path

GET /assets/\*file controllers.Assets.versioned(path="/public", file: Asset)

#Find Expert by keyword

GET /expertByKeyword/:keyword controllers.FindExpertByKeyWordController.getExpert(keyword: String)

GET /expertByKeyword/form/ controllers.FindExpertByKeyWordController.getForm()

#Find topics by channel

GET /topicsByChannel/:channel/:year controllers.FindTopicsByChannelController.getTopics(channel: String,year: String)

GET /topicsByChannel/form/ controllers.FindTopicsByChannelController.getForm()

# Following author

GET /paper controllers.PaperController.getForm()

POST /paper controllers.PaperController.postPaper()

GET /author controllers.AuthorController.getAuthorForm()

POST /author/profile/ controllers.AuthorController.getAuthor()

POST /follow controllers.AuthorController.follow()

POST /unfollow controllers.AuthorController.unfollow()

GET /dashboard controllers.DashboardController.getMyProfile()

GET /showKnowledgeCard/:title controllers.ShowKnowledgeCardController.getCard(title: String)

GET /showKnowledgeCard/form/ controllers.ShowKnowledgeCardController.getForm()

GET /researcherByKeyword/:keyword controllers.FindResearcherByKeywordController.getResearcher(keyword: String)

GET /researcherByKeyword/form/ controllers.FindResearcherByKeywordController.getForm()

GET /login controllers.UserLoginController.login

POST /loginResult controllers.UserLoginController.loginResult()

# Find Stats of followers

GET /stats controllers.AuthorController.statsFollowers

POST /stats controllers.AuthorController.getstatsFollowers

# Find Stats of user followers

GET /statsUser controllers.AuthorController.getstatsUserFollowers

POST /statsUser controllers.AuthorController.getstatsUserFollowers

GET /userProfile/form/ controllers.UserProfileController.getForm()

POST /userProfile controllers.UserProfileController.setProfile()

GET /showAuthorCard/:username controllers.ShowAuthorCardController.getCard(username:String)

GET /showAuthorCard/form/ controllers.ShowAuthorCardController.getForm()

# Find Networks of researcher

GET /collab controllers.AuthorController.researcherNetwork

POST /collab controllers.AuthorController.getResearcherNetwork

###### ADVANCE REQ STARTS HERE #######

# Adv 1

GET /evolution/:channel/:startYear/:endYear controllers.EvolutionByChannelController.getEvloutions(channel: String,startYear: String, endYear: String)

GET /evolution/form/ controllers.EvolutionByChannelController.getForm()

# Adv 2

GET /researchersByKeyword/:keyword controllers.FindResearcherByKeywordController.getResearchers(keyword: String)

GET /researchersByKeyword/form/ controllers.FindResearcherByKeywordController.getResearchersForm()

# Adv 3

GET /networkByKeyword/:keyword controllers.FindExpertByKeyWordController.getNetwork(keyword: String)

GET /networkByKeyword/network/form controllers.FindExpertByKeyWordController.getKeywordNetworkForm()

# Adv 12

GET /map/author/form controllers.MapController.getAuthorForm()

GET /map/author/:country/:keyword controllers.MapController.getAuthorLocations(country: String, keyword: String)

# Adv 13

GET /map/paper/form controllers.MapController.getPaperForm()

GET /map/paper/:conference/:startYear/:endYear controllers.MapController.getPaperLocations(conference: String, startYear: Integer, endYear: Integer)

GET /simpleCategories/:startYear/:endYear controllers.PaperCategoriesController.showSimpleCategories(startYear: String, endYear: String)

GET /simpleCategoriesform/ controllers.PaperCategoriesController.getForm()

GET /multiParamsCategories/:startYear/:endYear/:channels/:keywords controllers.MultiParamsCategoriesController.showCategories(startYear: String, endYear: String,channels:String, keywords:String)

GET /multiParamsCategoriesform/ controllers.MultiParamsCategoriesController.getForm()

GET /top20/ controllers.PaperController.getTop20Papers()

GET /top20years/form controllers.PaperController.formTop20PapersWithYears()

GET /top20years/ controllers.PaperController.getTop20PapersWithYears()

#Adv 14&15

GET /recommend/:keyword controllers.RecommendController.getRecommend(keyword: String)

GET /recommend/form/ controllers.RecommendController.getForm()

#Adv 8

GET /topkpapers/form controllers.PaperController.top\_k\_papers\_form()

GET /topkpapers/ controllers.PaperController.top\_k\_papers()