

CRC(Class-Responsibility-Collaboration) Card

Class-responsibility-collaboration (CRC) cards are a brainstorming tool used in the design of object-oriented software. CRC cards are a great tool by which multiple alternative interactions may be quickly devised, as they avoid a great deal of drawing and erasing. CRC card sessions may be followed by the creation of State Transition diagrams to capture interactions that are identified.

CRC cards are frequently employed during the design phase of system and software development to transition use-case descriptions into class diagrams, allowing a smoother transition with a greater overview and permitting developers to implement solutions with low binding and high cohesion.

Class: User	
Attributes	Methods
	<ul style="list-style-type: none">+ view_physiographic_geologic_feature()+ view_economic_aspect()+ view_general_facts()+ view_history_info()+ view_culture_info()+ view_sports_info()+ show_forms_of_government()+ view_travel_place()+ view_unions()
Responsibilities	Collaborator
1. View country info, ocean & sea info, leaderboard	1. Country, Ocean & Sea

Class: Registered User	
Attributes	Methods
<ul style="list-style-type: none">- Username- Country- email_id	<ul style="list-style-type: none">+ sign_up()+ login()+ recover_password()

<ul style="list-style-type: none"> - Password - Active_users - Top_scorer - Active_status 	<ul style="list-style-type: none"> + chat() + play_game() + play_mcq()
Responsibilities	Collaborator
<ol style="list-style-type: none"> 1. Reset password 2. View country info, ocean & sea info, leaderboard 	<ol style="list-style-type: none"> 1. Email 2. Country, Ocean & Sea, Chat, Multiple Choice Question, Gaming Quiz

Class: Admin	
Attributes	Methods
<ul style="list-style-type: none"> - Username - Country - email_id - password 	<ul style="list-style-type: none"> + change_information() + set_question() + set_level()
Responsibilities	Collaborator
<ol style="list-style-type: none"> 1. Change information regarding Country, Ocean & Sea 2. Set predefined questions 3. Manage user profile 	<ol style="list-style-type: none"> 1. Country, Ocean & Sea 2. Multiple Choice Question 3. User

Class: Email	
Attributes	Methods
<ul style="list-style-type: none"> - OTP 	<ul style="list-style-type: none"> + generate_OTP() + send_OTP()
Responsibilities	Collaborator

1. Send OTP	1. Registered User, Admin
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Class: Country	
Attributes	Methods
- name	+ show_general_facts() + show_history() + show_culture() + show_sports() + show_forms_of_government() + show_travel_place() + show_unions()
Responsibilities	Collaborator
1. Show general facts. 2. Show history related information. 3. Show culture based information. 4. Show sports related information. 5. Show forms of government marked on the map. 6. Show famous travel destinations. 7. Show unions of the world.	1. User

Class: Ocean & Seas	
Attributes	Methods
- name	+ show_physiographic_geologic_feature() + show_economic_aspect()
Responsibilities	Collaborator
1. Show physiographic geological feature of the ocean & seas 2. Show economic aspects of the sea	1. User

Class: Multiple choice question	
Attributes	Methods
<ul style="list-style-type: none"> - Level - score 	<ul style="list-style-type: none"> + show_question() + answer_question() + update_score()
Responsibilities	Collaborator
<ol style="list-style-type: none"> 1. Showing questions to the user. 2. Updating the score board. 	<ol style="list-style-type: none"> 1. Registered User

Class: Gaming quiz	
Attributes	Methods
<ul style="list-style-type: none"> - option - unmarked_map - leaderboard - Level - XP_Points 	<ul style="list-style-type: none"> + show_unmarked_map() + show_question() + answer_question() + update_XP_points() + update_leaderboard() + update_level_of_player()
Responsibilities	Collaborator
<ol style="list-style-type: none"> 1. Showing an unmarked map. 2. Show questions on the screen. 3. Update XP points. 4. Update leaderboard. 5. Update the level of the player. 	<ol style="list-style-type: none"> 1. Registered User

Class: Chat	
Attributes	Methods
<ul style="list-style-type: none"> - list_of_registered_user 	<ul style="list-style-type: none"> + make_active_user_list() + send_request() + accept_or_deny_request() + do_chat() + view_active_user()

Responsibilities	Collaborator
<ol style="list-style-type: none">1. Make active user list2. Send chat request3. Accept or deny chat request4. Chatting	<ol style="list-style-type: none">1. Registered User