

1. The purpose of this application is to provide information on rock climbing. A user utilizing this database can learn information about various aspects of climbing. Additionally a user can add, remove or update information as it changes. A climber could use this database to know what routes will be in a location that they visit. Conversely, the climber can also know what location a route is found in. Also, the climber might want to know what sponsor carries a specific type of clothing. This can be ascertained using the sponsor table. Similarly, a park-ranger at a location may want to know what routes to keep track of

2. see pdf

3. see below

- a. climbers

- i. The Climber table contains information about climbers. ClimberID is the primary key because any combination of the other fields does not necessarily indicate a unique climber. This is necessary because two climbers can have the same name. We also store the hardest route they have done on both the european and american rating systems, their birth country and what year they were born.

climberID	climberName	hardestGradeUS	hardestGradeEuro	country	birthYear
1	Chris Sharma	V15	9b+	USA	1981
2	Adam Ondra	V16	9b+	Czech Republic	1993
3	Sasha Digulian	V11	9a	USA	1992
4	Tommy Caldwell	V13	9a	USA	1978
5	Daniel Woods	V16	9a+	USA	1989
* NULL	NULL	NULL	NULL	NULL	NULL

- ii.

- b. sponsor

- i. The Sponsortable contains information about sponsors. To uniquely identify a sponsor, use sponsorID. This is necessary because two sponsors can have the same name. We also store the sponsor's name and what gear they offer.

sponsorID	sponsorName	gearOffered
1	La Sportiva	shoes
2	prAna	apparel
3	Five Ten	apparel, shoes
* NULL	NULL	NULL

- ii.

- c. route

- i. The Route table contains information about routes. To uniquely identify a route, use routeID. This is necessary because two routes can have the

same name in one location. We also store the location of the route, what the european and american rating scheme difficulties are, who first climbed the route, who established the route, and what type of climbs with its number of pitches.

	routeID	routeName	locationOfRoute	difficultyUS	difficultyEuro	firstAscent	typeOfClimb	numberPitches	routeSetter
▶	1	The Dawn Wall	Yosemite	5.14-15	9a	Tommy Caldwell	multi	17	T. Caldwell/K. Jorgeson
	2	Biographie	Ceuse	5.15a	9a	Chris Sharma	sport	1	Lafaille
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

ii.

d. location

- i. The location table contains information about locations. To uniquely identify a location, use locationID. This is necessary because two locations can have the same name. We also store what the hardest european and american rating scheme difficulties of routes in the location are and a notable route in the area.

	locationID	physicalLocation	hardestgradeUS	hardestgradeEuro	notableRoute
▶	1	Bishop	V15	9a	Ambrosia
	2	Fontainebleau	V15	5.15a	Biographie
	3	Red River Gorge	5.15b	9a+	Pure Imagination
*	NULL	NULL	NULL	NULL	NULL

ii.

e. climber_route

- i. The climber_route table contains a relation between that indicates what routes a climber has ascended. The combination of climberID and routeID is a primary key that identifies each relation. the climberID uniquely identifies a climber and the routeID uniquely identifies a route.

	climberID	routeID
▶	1	2
	3	1
	4	2
*	NULL	NULL

ii.

f. climber_sponsor

- i. The climber_sponsor table contains a relation between that indicates what routes a climber has ascended. The combination of climberID and sponsorID is a primary key that uniquely identifies each relation. the climberID uniquely identifies a climber and the sponsorID uniquely identifies a sponsor.

Result Grid			Filter Ro
	climberID	sponsorID	
▶	1	1	
	1	2	
	2	1	
	3	1	
	3	3	
	5	2	
	5	3	

ii.

4. map of web pages

- a. The home page contains links to both add and view tables on the Climber, Route, Sponsor, Route, Location, and Climber_Route and Climber_Sponsor tables.
- b. The climber view table page, Climber/view/table, displays the names of each climber in the table. From the page, the user can edit, delete or look at more information for each climber.
 - i. If the user clicks more info, they are taken to the specific climber's page, climber/. The information displayed is their name, the hardest climbing difficulty they have climbed for both european and american rating schemes, and their birth year and birth country.
 - ii. The user can also modify a specific climber's information by clicking the edit link to climber/edit.
 - iii. Once the user has filled in all the fields on the page climber/edit and clicked submit, the user is taken to an updated page, climber/update that shows the new information for the climber after the record is updated.
 - iv. If the user is on the view table page and clicks delete, then the user is taken the page climber/delete. The record storing that climber is deleted and taken to a page that will show whether the deletion of the climber was successful.
 - v. If on the homepage the user clicks on Add a climber, then they are taken to a page, climber/add, with fields to add information about a climber
 - vi. when the user clicks submit, a new record containing the information found in the fields from climber/add is inserted into the table and the result of the insertion is shown on climber/insert
- c. The route view table page, route/view/table, displays the names of each route in the table. From the page, the user can edit, delete or look at more information for each route.
 - i. If the user clicks more info, they are taken to the specific route's page, route/. The information displayed is the route's name, location, difficulty

rating in both USA and european rating schemes, the type of climb, how many pitches the routes has, who first ascended the route and who established the route.

- ii. The user can also modify a specific route's information by clicking the edit link to route/edit.
 - iii. Once the user has filled in all the fields on the page route/edit and clicked submit, the user is taken to an updated page, route/update that shows the new information for the route after the record is updated.
 - iv. If the user is on the view table page and clicks delete, then the user is taken to the page route/delete. The record storing that route is deleted and taken to a page that will show whether the deletion of the route was successful.
 - v. If on the homepage the user clicks on Add a route, then they are taken to a page, route/add, with fields to add information about a route.
 - vi. when the user clicks submit, a new record containing the information found in the fields from route/add is inserted into the table and the result of the insertion is shown on route/insert.
- d. the sponsor view table page, sponsor/view/table, displays the names of each sponsor in the table. From the page, the user can edit, delete or look at more information for each sponsor.
- i. If the user clicks more info, they are taken to the specific sponsor's page, sponsor/. The information displayed is the sponsor's name and gear offered.
 - ii. The user can also modify a specific sponsor's information by clicking the edit link to sponsor/edit.
 - iii. Once the user has filled in all the fields on the page sponsor /edit and clicked submit, the user is taken to an updated page, sponsor/update that shows the new information for the sponsor after the record is updated.
 - iv. If the user is on the view table page and clicks delete, then the user is taken to the page sponsor /delete. The record storing that sponsor is deleted and taken to a page that will show whether the deletion of the sponsor was successful.
 - v. If on the homepage the user clicks on Add a sponsor, then they are taken to a page, sponsor/add, with fields to add information about a sponsor.
 - vi. when the user clicks submit, a new record containing the information found in the fields from sponsor/add is inserted into the table and the result of the insertion is shown on sponsor/insert.

- e. the location view table page, `location/view/table`, displays the names of each location in the table. From the page, the user can edit, delete or look at more information for each location.
 - i. If the user clicks more info, they are taken to the specific location's page, `location/`. The information displayed is the location's name, a notable route and hardest difficulty rating in both USA and european rating schemes.
 - ii. The user can also modify a specific location's information by clicking the edit link to `location/edit`.
 - iii. Once the user has filled in all the fields on the page `location/edit` and clicked submit, the user is taken to an updated page, `location/update` that shows the new information for the location after the record is updated.
 - iv. If the user is on the view table page and clicks delete, then the user is taken the page `location/delete`. The record storing that location is deleted and taken to a page that will show whether the deletion of the location was successful.
 - v. If on the homepage the user clicks on Add a location, then they are taken to a page, `location/add`, with fields to add information about a location.
 - vi. when the user clicks submit, a new record containing the information found in the fields from `location/add` is inserted into the table and the result of the insertion is shown on `location/insert`.
- f. the climber_sponsor view table page, `climber_sponsor/view/table`, displays each sponsor that has a climber and a more info link to see who they sponsor.
 - i. If the user clicks more info, they are taken to the specific sponsor's page, `climber_sponsor/`. The information displayed is every climber that a specific sponsor "sponsors".
 - ii. If on the homepage the user clicks on Add a climber_sponsor, then they are taken to a page, `climber_sponsor/add`, with fields to add a new relationship between a climber and a sponsor.
 - iii. when the user clicks submit, a new record containing the information found in the fields from `climber_sponsor/add` is inserted into the table and the result of the insertion is shown on `climber_sponsor/insert`.
- g. the climber_route view table page, `climber_route/view/table`, displays each climber has ascended a route in the database.
 - i. If the user clicks more info, they are taken to the specific climber's page in `climber_route/`. The information displayed is every route that a specific climber has ascended.
 - ii. If on the homepage the user clicks on Add a climber_route, then they are taken to a page, `climber_route/add`, with fields to add a new relationship between a climber and a route.

- iii. when the user clicks submit, a new record containing the information found in the fields from climber_route/add is inserted into the table and the result of the insertion is shown on climber_route/insert.