DYNAMIC RESUME RANKER

Submitted By:
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Acknowledgement

Right from the beginning date till the completion of the project, we were fortunate to have people to guide us in every step of the way. Being involved in such a project was a first time experience for us and the project would not have seen the light of the day without the incessant support and toil of the our instructor Dr. Pritee Khanna. Also, the technical skills imparted by Mr. Sharique Husain made the challenging task look easy. We thank them from the bottom of our heart. We would also like to acknowledge the valuable suggestions of our seniors Mr. Rajarshi Skand Gupta, Mr. Harendra Singh and Mr. Nipun Chaubey. Last, but never the least, we express our gratitude to our family and friends who made sure that we keep receiving the much needed emotional support throughout the phase of project development.

Abstract

The project "Resume Ranker" aims to simplify the shortlisting phase during recruitment. As the number of applicants for any job vacancy soars up, it becomes an extremely tedious task for the HRs to shortlist the profiles on the basis of CVs. Moreover, the view-time of a CV in those cases is reduced to as low as 15-20 seconds. This enhances chances of rejection of a deserving candidate.

Further, from the students' point of view, it is always beneficial to test the depth of waters before diving. Through this website, the students will be able to judge the level of their technical proficiency as per the industry standards and brush up their skills accordingly. In this way, the project serves a two-way purpose for both the students and the recruiters.

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INRODUCTION

The website proposed in the project is meant to rank the candidates applying for a job vacancy or internship. The candidates are supposed to fill their CV in a menu-driven online form. The form tends to cover as many aspects of a CV as possible. Next, a recruiter who wishes to shortlist the pool of candidates is asked to first register and then fill a form that describes the requirements of the recruiter.
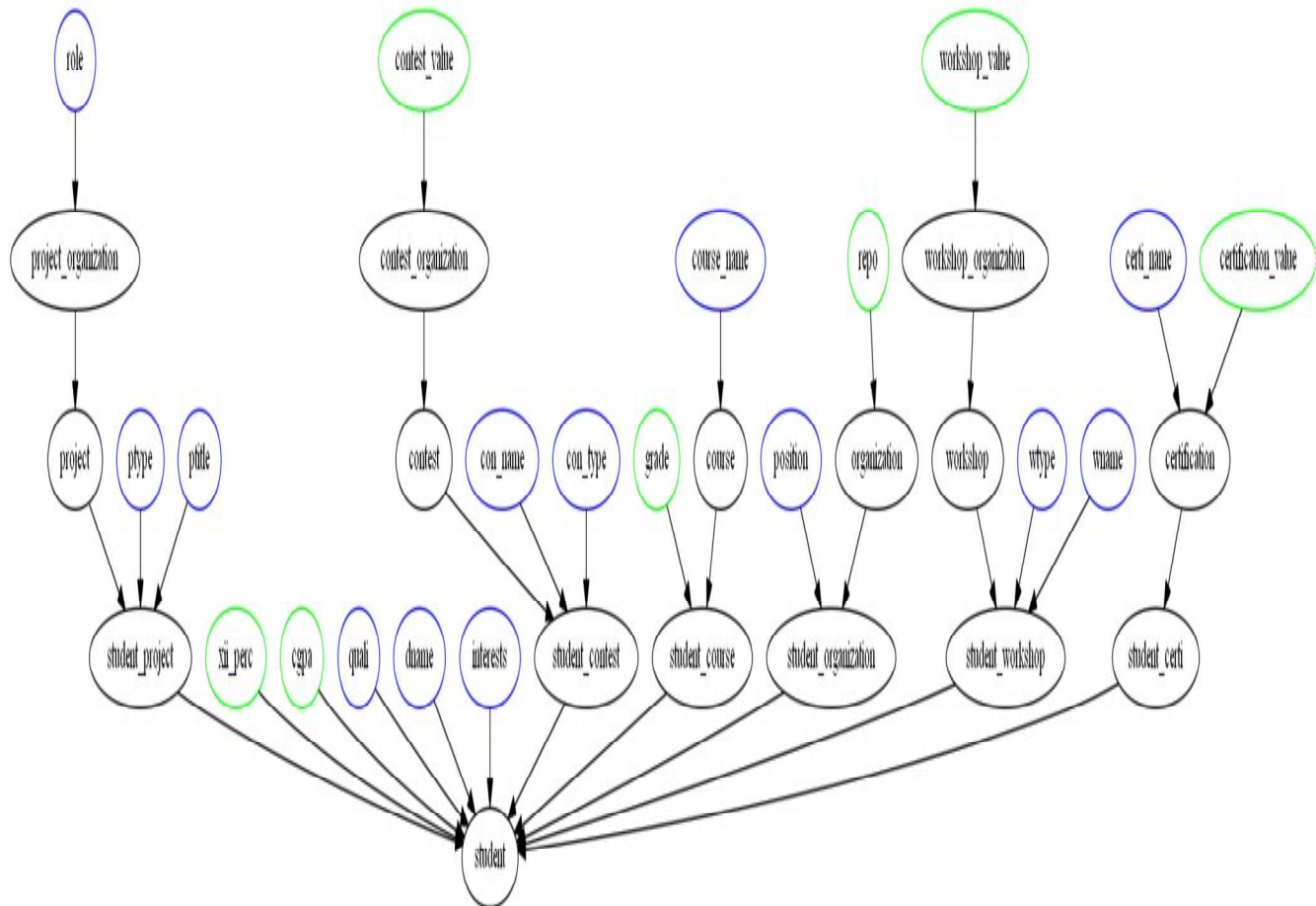
Once both the data sets are available, the ranker produces a leaderboard of candidates in the order of their ranks.

The project can be used by the placement cells of the institutes for sorting out the list of the students in the college, or can be brought in use by recruiters for the shortlisting purpose.

In section 1 of the report, we would discuss the present day softwares as well as the methodologies that exist in the domain. The second section would introduce the E-R diagram of the database. It would also include the method to generate a formula for ranking. In section 3, we would cover the details of implementation of code which would be followed by the snapshots of the software as section 4.

RATING AND RANKING SYSTEM

Our rating method is based on weighted summation of all the attributes which a recruiter is willing to see in a candidate. The weights are given on a scale of 1 to 10. Below is a schematic representation of our rating tree.

Rating tree for a student

In the rating tree , student is the root node. All the directed edges entering the student node are weighted. For example, xii_perc is 80%, and weight given to it is 5. Then the rating which will enter the student node will be 400. Similarly for other edges.

The green nodes are mathematical values and the blue nodes are non-mathematical entities which affect the rating. For example, a student have given ACM ICPC contest. A recruiter also have also a requirement for a candidate who performed in ACM ICPC. So, what our software will do is first search for how many times ACM ICPC had been given by a student. Multiply this result with the value of ACM ICPC organization value and then multiply the whole result with the weight given by the recruiter to this criteria.

Similarly for the workshops. Firstly the name and type of the workshops are searched from student data. This count is multiplied by the value of workshop. And this complete number is multiplied by the weight given to this criteria by the recruiter.

The final formula will be like

Complete rating = project_weight*(count(ptype,ptitle,role)) +

Xii_perc * xii_perc_weight +

Cgpa* cgpa_weight +

Count(interest) * interest_weight [in further scope] +

Count(con_name,con_type) * con_weight*contest_value +

Count(Course1)*course1_weight*course1_grade +

Count(Course2)*course2_weight*course2_grade+

Count(student_organisation.position)*repo*stu_org_weight[in further scope] +Count(wtype,wname)*workshop_value * workshop_weight +

Count(cert_name)* certification_value * cert_weight

Since all the weight will be in the range 1-10. Our rating will be bounded by a value. That will vary on the basis of how many workshops,certification,interest etc. the company is going to give weight to.

Ranking are based on the relative ratings of students. The student with the highest rating will be ranked first. And second highest rating student will be second and so on. The new user on login is given a rank 0. And is considered to be not ranked according to the system. This rating system is good enough for properly ranking a group of students from the same branch. According to a company who require CSE students, the rating of ME, ECE etc discipline students will be zero.

Implementation

In our project, we start with the home page, providing both login and signup options for students as well as recruiters.

When a student signup's for the very first time, he is asked to enter his **academic qualifications**, his/her **interests areas** along with his **personal details** (filling this form is mandatory for the student).

After filling that, student can then proceed to mention his/her **project(s)** and there details if he wishes to. The details about a project include Project Title, Project Type (Academic, Individual, Intern Project or Work Project), Status (Completed or Ongoing), his/her role (Designer, Developer or Tester), Start Date, End Date (if completed), and a Web link (if available).

Next to projects, the student is asked to enter few **courses** with which he/she is best familiar with. He/she is also asked to provide the grade with which he/she was rewarded in that course

And at the end he/she can enter information about the **workshops attended, contests participated and certifications rewarded with** and there different information. The details include Organizer's Name, Name of the workshop/contets/certification, its type (core/advanced), start data and end date.

This completes the student profile, and we store all this information about each student in the database in an organized structure.

After completing the profile. Student is redirected to his dashboard where he is able to see the leaderboard displaying the top 5 students rated overall by all the companies. Along with the leader board he/she is also able to see his personal details and his/her overall rank by all the companies.

The student is also provided with a logout option if he wishes to logout and log back in after a while.

All this information and rank of this new student is stored in our database.

When a **company signs up** for the first time, it is asked to fill its **profile** details (Name, Establishment year, a contact to HR of the company and the number of branches of that compamy).

After filling up the profile, the **company** is asked to fill its **requirements/preferences form** in which it mentions what it expects from a student to have in order to be a part of that company.

The requirements/preferences include the desired discipline of student candidate (CSE/ECE/ME), weightage the company wants to give to XII percentage and current CGPA of the student candidate. Along with this there are fields for technical preferences of the company including the workshops it desires the student should have attended along with a weightage assigned to it. The certifications the student candidate should possess, and the contests he/she should have attended. Both are also assigned a weightage by the company itself.

After all this, if the company also wants to give some weightage to some specific course for the applicant, it may give.

All the **weightages** assigned by company are calculated on a **scale of 1-10.**

Currently we have these many options, and we are further looking forward to upgrade the requirements so that we may give the student more appropriate rank.

After filling up the requirements form, the company is redirected to its dashboard where it sees a little information about itself, the **leaderboard** of top5 students rated overall by all companies including this new one, and a graph comparing the ratings of the students in the leaderboard, and another graph comparing students on the criteria given by this new company.

The student can also log back in and see his/her dashboard and his current/updated rank.

His/her **rank may get updated** when a new student enrolls in our software or a company changes weightages assigned to the criteria's.

This is where the **dynamic** nature of our software comes into picture.

When the company log's back in, it is able to view its dashboard and a link to update the requirements/preferences it has filled earlier.

LITERATURE REVIEW

At present, the web has a lot of softwares that deal with the creation and beautification of resumes. We do have websites that can take input in the form a menu-driven form and produce a resume in a pdf or jpg format. However, the web lacks in the softwares that could rank the profiles of people according to their resumes.

Further, the ranking method had to be decided upon. For this purpose, various ranking models were studied and analysed. We looked at the ranking models used by programming contest sites like codechef.com and spoj.com. These websites use dynamic ranking models which upgrade or downgrade a user's ranking based on their current performance stats. One significant point to be noted in these ranking methods is that they downgrade a user's ranking if the user stays dormant for a long time, or performs below the standards he set in his previous performances.

In the process, we also studied the ranking model used by gadget-descriptive websites. The term 'spec-score' is a very common term used in them which tells the points scored by a particular gadget on the basis of its specifications. In them, every specification has some weightage depending on the relevance of that feature. Now, the phone's level of sophistication in every such feature is taken into account and the points are added keeping in view the due weightage of the feature. The ranking method that we used in our project is more or less an adaptation of this model of ranking.

SNAPSHOTS

Table	Action						Rows	Type	Collation	Size	Overhead
certification	Browse	Structure	Search	Insert	Empty	Drop	7	InnoDB	latin1_swedish_ci	16 KiB	-
certi_rating	Browse	Structure	Search	Insert	Empty	Drop	2	View	---	-	-
contest	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	latin1_swedish_ci	32 KiB	-
contest_organisation	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	latin1_swedish_ci	16 KiB	-
contest_rating	Browse	Structure	Search	Insert	Empty	Drop	1	View	---	-	-
course	Browse	Structure	Search	Insert	Empty	Drop	11	InnoDB	latin1_swedish_ci	32 KiB	-
course1_rating	Browse	Structure	Search	Insert	Empty	Drop	4	View	---	-	-
course2_rating	Browse	Structure	Search	Insert	Empty	Drop	4	View	---	-	-
discipline	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	latin1_swedish_ci	32 KiB	-
disc_stud	Browse	Structure	Search	Insert	Empty	Drop	10	View	---	-	-
interests	Browse	Structure	Search	Insert	Empty	Drop	12	InnoDB	latin1_swedish_ci	16 KiB	-
leaderboard	Browse	Structure	Search	Insert	Empty	Drop	2	View	---	-	-
organisation	Browse	Structure	Search	Insert	Empty	Drop	11	InnoDB	latin1_swedish_ci	16 KiB	-
org_rating	Browse	Structure	Search	Insert	Empty	Drop	4	View	---	-	-
overall_rating	Browse	Structure	Search	Insert	Empty	Drop	15	View	---	-	-
project	Browse	Structure	Search	Insert	Empty	Drop	8	InnoDB	latin1_swedish_ci	32 KiB	-
project_organisation	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	latin1_swedish_ci	16 KiB	-
project_rating	Browse	Structure	Search	Insert	Empty	Drop	4	View	---	-	-
recruiter_login	Browse	Structure	Search	Insert	Empty	Drop	11	InnoDB	latin1_swedish_ci	64 KiB	-
rec_data	Browse	Structure	Search	Insert	Empty	Drop	2	InnoDB	latin1_swedish_ci	32 KiB	-
student	Browse	Structure	Search	Insert	Empty	Drop	10	InnoDB	latin1_swedish_ci	48 KiB	-
student_certi	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	latin1_swedish_ci	16 KiB	-
student_contest	Browse	Structure	Search	Insert	Empty	Drop	5	InnoDB	latin1_swedish_ci	16 KiB	-
student_course	Browse	Structure	Search	Insert	Empty	Drop	6	InnoDB	latin1_swedish_ci	16 KiB	-
student_login	Browse	Structure	Search	Insert	Empty	Drop	12	InnoDB	latin1_swedish_ci	64 KiB	-
student_organisation	Browse	Structure	Search	Insert	Empty	Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
student_project	Browse	Structure	Search	Insert	Empty	Drop	6	InnoDB	latin1_swedish_ci	16 KiB	-
student_workshop	Browse	Structure	Search	Insert	Empty	Drop	5	InnoDB	latin1_swedish_ci	16 KiB	-
stu_rating	Browse	Structure	Search	Insert	Empty	Drop	1	InnoDB	latin1_swedish_ci	16 KiB	-

Rank your resume with...
Resume Ranker

About us

Resume Ranker is a website meant for ranking resumes. In the competitive ethos of the technical world, it is always an added advantage to know where you stand and where you lack. To simplify things for the technocrats, we came up with the concept of Resume Ranker. Also, from the recruiter point of view, the site serves as a gateway to speed-up shortlisting from a pool of hundreds of candidates.

How do we rank?

The ranking system is based on a set of dynamic statistical estimators. First, a recruiter fills up its priorities and assigns each possible bullet of a CV a particular weight. Now, based on the recruiter's demands, the system generates a formula on which all the CV's can be ranked. Thus, the same CV may have different ranks based on the choice of recruiter.

Sign up

Your username

u   das

Your email

e   das@gmail.com

Your password

p   •••

Please confirm your password

p   •••

Signup As: Student ▾

SIGNUP

All fields marked with * are mandatory.

Field	Input
Name*:	
Date of Birth*:	Day ▾ Month ▾ Year ▾
XII Percentage:	
ADDRESS:	
CGPA*:	
CONTACT:	
Institute*:	
Highest Qualification*:	
Discipline*:	▾
Interests*:	Separate different interests with ',' only

Submit   Skip

Rank your resume with...
Resume Ranker

Name:	Lokendra Sharma
Project Title*:	
Project Type*:	[▼]
Status*:	[▼]
Role*:	[▼]
Start Date*:	Day [▼] Month [▼] Year [▼]
End Date:	Day [▼] Month [▼] Year [▼]
Web Link:	

[Submit] [Add More] [Skip]

Rank your resume with...
Resume Ranker

Form to input details about the technical skills of candidate

Choose between Workshop/Contest/Certification*: [Workshop ▼]

Organisor Name*: [ ]

Name of the workshop/contest/certification*: [ ]

Workshop/Contest/Certification Type*: [ ]

Start Date*: Day [▼] Month [▼] Year [▼]

End Date: Day [▼] Month [▼] Year [▼]

[Skip]   [Submit & Add More]   [Submit and proceed]

Rank your resume with...
Resume Ranker

Enter the details of four courses that you are best familiar with

Sno	Course Name	Grade
1.	---------Select--------- ▼	---Select--- ▼
2.	---------Select--------- ▼	---Select--- ▼
3.	---------Select--------- ▼	---Select--- ▼
4.	---------Select--------- ▼	---Select--- ▼

Skip   Submit and Proceed

Rank your resume with...
Resume Ranker

Lokendra Sharma's DashBoard

Institute Name	:	IIITDMJ
Department	:	CSE
Programme	:	BTECH

Rank
1

Logout

Leaderboard

Name	Institute	Rating
Lokendra Sharma	IIITDMJ	704
qwe	IIITDMJ	602

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Sign up

Your username

u   sysco

Your email

e   sysco@sysco.com

Your password

p   •••••

Please confirm your password

p   •••••

Signup As: Recruiter ▼

SIGNUP

Already a member ? Go and log in

Rank your resume with...
Resume Ranker

Resume Ranker

Organization Name*:	sysco
Established Year*:	Day 4 ▾ Month April ▾ Year 2002 ▾
HR Contact:	123456789
Number of Branches:	7
	Submit

Rank your resume with...
Resume Ranker

Resume Ranker

Recruiter Organisation Name	
Desired Department	CSE ▾
Academic priorities	
XII percentage Weightage	
CGPA Weightage	
Technical Preferences	
Workshops desired on topics	Separate different topics with ',' only
Weightage to workshops	
Certifications desired on topics	Separate different topics with ',' only

Weightage to workshops	
Certifications desired on topics	Separate different topics with ',' only
Weightage to certifications	
Type of Contests desired	Separate different topics with ',' only
Weightage to Contests	
Type of Projects desired	Separate different titles with ',' only
Weightage to Projects	
Any Extra Weightage to some particular course	
Course Name	--------------Select--------------
Weightage	
Course Name	--------------Select--------------
Weightage	
	Submit

Rank your resume with...
Resume Ranker

codechef

Table for the Ratings of candidates

Rank	Name	Insitute	Discipline	Rating
1	Lokendra Sharma	IIITDMJ	CSE	352
2	qwe	IIITDMJ	CSE	292

Dashboard of Recruiter

Organisation
Name   :   codechef

Establishment
Year   :   1993

Reputation   :   6
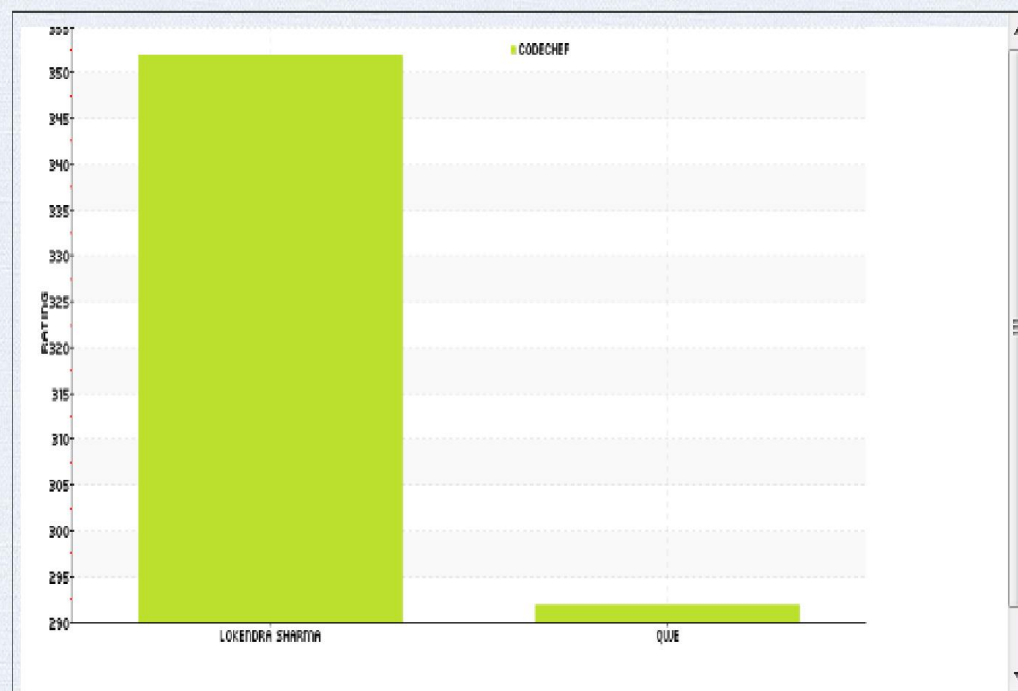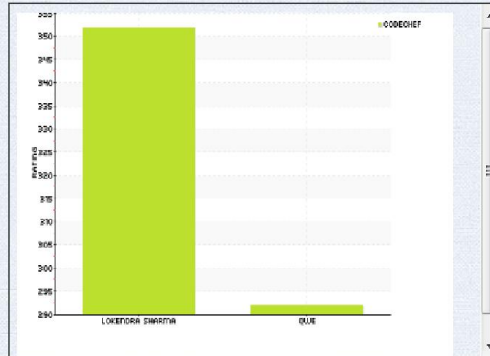
Click to see the ratings of all candidates

Logout

Graph for the leaders according to your requirements
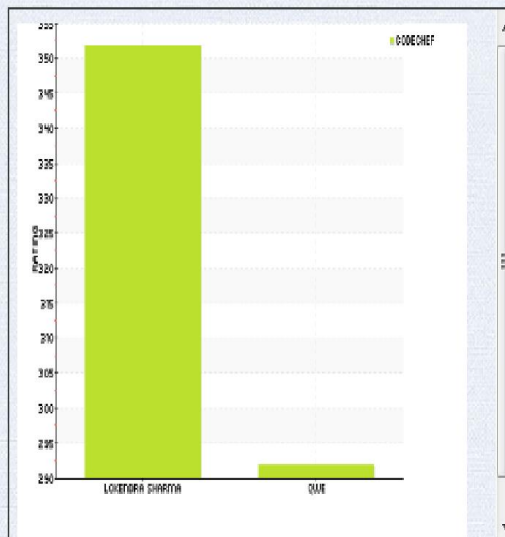
Leaderboard

Name	Institute	Rating
Lokendra Sharma	IIITDMJ	704
qwe	IIITDMJ	602

Detailed analysis of the leader Candidates

Dashboard of Recruiter

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Establishment Year : 1993

Reputation : 6
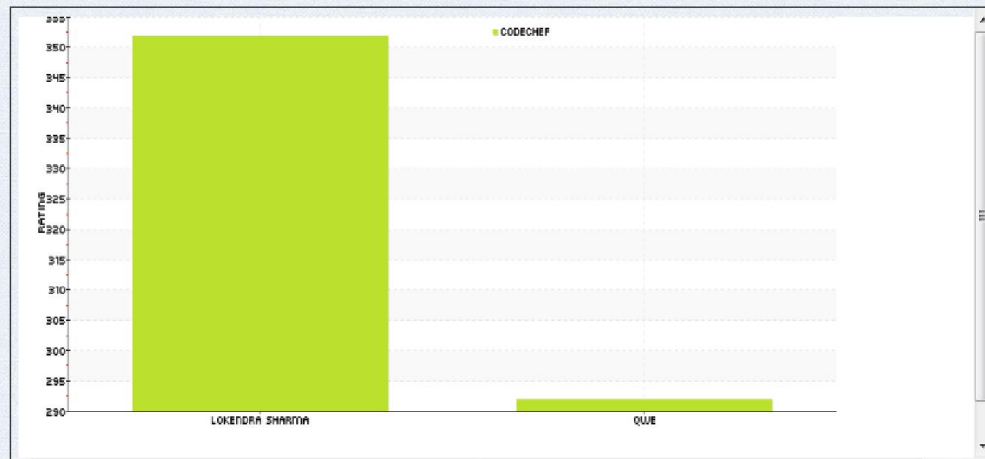
Click to see the ratings of all candidates

Logout

Graph for the leaders according to your requirements

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Detailed analysis of the leader Candidates

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Resume Ranker

Goto DashBoard

codechef

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