

WEBSTER PROBLEM STATEMENTS

CyberQuest, Avishkar 2019, MNNIT Allahabad

Aham Brahmasmi



Rules & Suggestions :

- You can use any language of your choice, you are not bounded to use PHP only.
- Use of cms (like Joomla, WordPress, etc.) is not allowed.
- Use of GitHub is also encouraged.
- Use of templates is not allowed.
- Use of plugins is encouraged.
- Please try to use APIs as much as possible.
- You can make the project in teams (of max 3 members), no branch restriction.
- Partial projects will also be considered for evaluation, but please try to complete the project as much as possible.
- Team members can be from the different year (Except first year).
- The judging criteria will be:
 - Maximum focus on backend design
 - Code organization
 - Database organization
 - Scalability of the project
 - Mobile Browser Compatibility
 - Documentation (proper comments)
- Simplicity and elegance are encouraged for the front-end design.
- The use of libraries such as Bootstrap and jQuery are encouraged.
- If the project work is found to be plagiarized, then it would lead to immediate disqualification.

Poster Maker (Easy)

Gaitonde has recently shot for a film “International Khiladi”. He is ravenous of publicity and hence wants posters for his film and company. Gaitonde has hired you for this simple job. You are required to make a poster making website having the following features.

Basic Features:

- Login/Signup for users.
- Providing several templates corresponding to the various categories (Event, Vacancies, Fundraising) to change the poster design.
- Basic details corresponding to each categories should be taken input by the user.
- Exporting to various formats such as pdf, docx etc.
- Quick Preview of the poster before downloading.

Advanced Features:

- Direct login with Facebook/Google.
- Providing options to change the background photo.
- Provide option to customize color scheme and fonts etc.

Quiz Portal (Easy)

Guruji wants to select only enlightened disciples to move into Satyug. Guruji has appointed your team to develop a Quiz Platform that will measure their capabilities.

Basic Features:

- Login/Signup for admin who will create the quiz.
- Admin should be able to choose the number of questions, type of each question(MCQ or Subjective), negative marks for each question, duration of the quiz and the question itself.
- Any user should not be able to attempt any quiz more than once.
- Users should be able to reset the selected options or answers.
- Total Marks need to be calculated as soon as the user submits the test.

Advanced Features:

- Support for images can be there.
- The questions need to be shuffled each time the quiz is attempted.
- If the quiz can't be completed due to any reasons (connection broken, the page is refreshed), the session is restored upon login.
- If the connection breaks at any time, the user should not be able to attempt the quiz any further.
- Admin should be able to view the stats for the quiz.

Interview Experience Sharing Portal (Easy)

Jojo's business is at its peak in Mumbai. There are a lot of "candidates" who want to work under her. Jojo likes to conduct interviews before recruiting the "candidates". Hence, you are required to create a website for the "candidates" in which the users can share their interview experiences.

Basic Features:

- Login/Signup facility for users.
- Basic details like Company name, Job location, etc. need to be asked.
- Only final/third year students can post their experience.
- Any particular interview experience can be downloaded in pdf or doc format.

Advanced Features:

- Login/SignUp using Facebook and Gmail (Use API provided by Facebook and Gmail).
- Implement search feature based on Company name or Student name.
- Implement a chat feature to chat or message directly to the senior.
- Categorize the posts based on the company name.

Car Game (Medium)

After a bad trip to jail, Gaitonde bhau is now out and working with RAW in Mombassa. To earn some money he opens a casino in Mombassa. To attract customers bhau wants to set up a gaming console in his casino. As bhau is busy with Yadav Tai he wants you to help him.

You need to build a car game in which there is a 3 lane road and the car is running on any of the lanes. You need to place obstacles on the lanes and the player has to survive by not crashing the car into any of the obstacles. The speed of the car should be gradually increasing.

Basic Features:

- User Login/Signup facility
- A nice interface for the game
- Showing a user's high score and other achievements
- Show a global leaderboard
- Add a feature of special powers(i.e. Slowing down speed for some time, Removing all obstacles for some time and some more that you can think of)
- Unlock different car skins(Fancy cars etc) when someone scores points more than required points to unlock that car

Advanced features:

- Login/Signup using Google/Facebook etc
- Share your achievements/high score on Facebook
- Add feature of jumping over the obstacles for some special cars
- Add feature of bombing the obstacles for some special cars
- Add feature of moving obstacles rather than static obstacles(i.e. Other moving vehicles like truck, cars, etc)
- Varying hardness of obstacles(i.e. Some obstacles that can't be bombed or longer in length so you cannot jump over it)
- Features like keys in subway surfer using which you can revive.

NOTE: This problem doesn't have fixed no. of points. You can add more creative features and we will give extra points for additional features according to the creativity of the added feature.

Bill Splitter (Medium)

After setting up the gang in Kailashpada in his early days, Gaitonde bhau had found that there were many disputes related to money in the gang. Now he wants to find a solution and wants you to build a bill splitter so that in his new team he doesn't have to worry about this problem anymore. As Gaitonde bhau is THE ONLY BRAHM. You have to do this for him :P

Basic Features:

- User login/signup facility
- Finding other users through their email to add expenses with the user
- User can make groups with other users
- Add other users as friends
- Beautiful UI for users
- User dashboard where user can see all expenses and other details
- Search expenses by user/title/tags etc.
- Tagging the type of expense(i.e. Food bill, Shopping bill, etc)
- Feature for currency conversion(preferred: It should update every day according to stock market)

Advanced Features:

- User login/signup through Google/Facebook etc
- Reminders through email when an expense is added/settled
- Reminders through SMS when an expense is added/settled
- Show monthly/weekly graphs/histograms etc of spendings
- Show filtered graphs/histograms(i.e. graph for expenses on food only, rents only, etc)
- Invite other users through email/facebook sharing

See [SplitWise](#), [KittySplit](#) for reference

Online Judge (Medium)

Now since Satyug has arrived leaving Mumbai and a large part of North India under its effect. MNNIT Allahabad students knew the technology by which they saved them from the attack. But now there are no coding platforms left as the servers are destroyed. So the survivors of MNNIT have appointed you to make an online judge through which they can run their codes so that coding culture is re-established in the college.

Basic Features:

- Login/Signup facility for users and problem setters.
- Showing questions based on tag and difficulty level.
- User dashboard showing followers and questions solved by him etc.
- Showing all contest past, present, and future.
- Code compile, run and submit facility(using API service).
- The problem setter will also upload the correct output which will be checked by the code's output
- Showing user performance graph.
- Contest live leaderboard with various filters.

Advanced Features:

- Login/Signup with GitHub or Gmail etc.
- Contest hosting facility.
- Compile and run code locally (without the use of any API service).
- Make a smart code editor.
- Users can comment on certain questions.
- Private chat area.
- Push notification via Gmail before any contest.

See [CodeChef](#), [CodeForces](#) for reference.

TV Shows Tracker (Hard)

As you all know, Bunty has become a TV show producer in Mumbai. He has produced so many TV shows that his viewers are having a hard time keeping track of what they have watched. Hence, you have been appointed to create a website for helping people in tracking what they have watched.

Basic Features:

- User login/signup facility
- Mail verification during signup
- Option to reset password
- Users can search for specific TV shows
- Users can add specific TV shows to their account
- Users can mark episodes which they have watched
- Show statistics of watched TV shows
- Display most-watched and recently watched TV shows
- Users can search and add other users as friends by sending a request
- Users can see their friends' profiles
- Users can rate shows as well as individual episodes
- Users can make shows private so that friends can't see them on the user's profile
- Users can add comments on episodes
- Login and sharing using social media
- Show upcoming TV shows

Advanced Features:

- Show trending TV shows
- Recommend TV shows based on what the user or the user's friends watch
- Users can group their shows into custom folders
- Users should be notified whenever an episode's release date is near
- Users can see a calendar based on the release dates of the episodes of the shows

Video-Sharing Portal (Hard)

After all the unsuccessful attempts by Sartaj and his team, Satyug has finally arrived as per Guruji's plan. Mumbai is destroyed and all the remaining survivors now want you to build a video sharing portal as Google has blocked YouTube in Mumbai due to world peace reasons. All the remaining citizens of Mumbai has appointed your team to build a video sharing portal.

Basic Features:

- User Login/Signup portal with mail verification
- Reset password using SMS OTP or mail
- Upload videos in their account and import videos from other user's account
- While uploading videos, a complete description of video content like genre, type, movie, tags, thumbnail, etc.
- Rename the videos in their account
- Create playlists and each video can be a part of multiple playlists
- Search videos and playlists in own account as well as other's account
- Search other users and see their collection
- Play any video online
- The video player should have features such as next, prev, play/pause, fullscreen, etc.
- Mark any particular video as private, so that no one else can see it or add it to their account
- Report to admin for spam or irrelevant video content in other's account, if it is not private
- Like and comment on any video
- Comments can be deleted and edited by comment maker and deletion by the video owner only. Admin can delete an inappropriate comment
- One-to-one chat for users to request user others to upload videos
- Social media login and sharing of a video on social media
- Change the theme of the whole website with a single click(e.g. Light/Dark)
- Add other's video in a playlist to watch later
- Filter option on video playlists in your account as well as other's collection in alphabetical order, views, date uploaded, etc.

Advanced Features:

- Make sure only one copy of the video exists on the server even if uploaded with a different name
- Add favorite users and get notified when he uploads any video
- Recommend videos based on the current collection and viewing history
- The video player can have many features such as skip +10/-10 sec, keyboard shortcut, quality, subtitle, etc.
- Resuming videos from the point last played when the user re-login
- Autoplay videos in the playlist and can rearrange videos in it

Collaborative Workspace (Hard)

Ganesh Gaitonde is bamboozled by his third father (Guruji). Guruji's concept of Satyug is not what Gaitonde wanted. Therefore he wanted to reorganize his gang and have collaborative work under his organization for which he needs a collaborative work portal. Since Ganesh Gaitonde has not attended any of the webster classes, he has appointed you for this work. So you are required to make a web portal that has the following listed features.

Basic Features:

- Organizational login/signup
- Member login/signup
- Option to create different teams within an organization. The one who creates a team becomes an admin.
- Dashboard for individual teams (No separate dashboard for users).
- Members can request to join a team to be approved by the admin of the team.
- A member can be associated with at most one team.
- Every team will be having file storage. Option to upload files should be there.
- Option to create folders in that file system and group the files in the system.
- Option to download the file.
- Only members of the team can upload the files to their respective teams while members of other teams can only download it.
- Option to make files private within a team by the uploader.
- Option to leave a team and request into other teams.
- Option for a taskboard that has a to-do list and completed task options.
- Once the task is assigned to a member it can only be deleted by the user who has assigned it and by the user to which it is assigned.
- Users can put the task of to-do under the completed section.
- Team chat option.
- Option to chat with individual members.
- Option to publish news articles with a certain layout in a team.
- Adding an image to the news article.
- Other members can visit the team dashboard and see the news articles.
- News articles to have views and unique viewers.

Advanced Features:

- Each user should have a calendar where he/she can add his appointments or meetings.
- Tasks to have a deadline and when the critical date approaches the user has to be notified through emails.
- Doc files uploaded to be editable online.
- Notification to the user who has uploaded the doc file through email when the file has been edited online.
- Reset password using email.

For your reference, you can see [SharePoint](#) product of Microsoft.

OPEN PROBLEM

Didn't get excited by any of the above statements or have any other cool idea with you? No problem. You are free to choose any other idea and build a website regarding the same. You can add as many features as you want. It's all on you. Excited??? But there's a catch. You have to follow a theme. The theme of this problem is **EDUCATION**. Just make to sure contact any of us before actually getting your hands dirty!

HAPPY DEVELOPMENT..!!!