

503073 – WEB AND APPLICATION PROGRAMMING

FINAL PROJECT – SEMESTER II/2023-2024

Use your knowledge to build one of the websites in the list below.

I. TOPIC LIST

| Seq | Topic name | Inquiries on the part of the customer | Admin side - requirements |
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| 1 | Online flight booking website | <ul style="list-style-type: none"> - Refer to: https://www.bamboairways.com/vn-vi/ - Description : Build a website for 1 airline like Bamboo Airway, for customers to search and book flights. The manager can view booking information, statistics, manage flight information.... - Functions: - Allows users to search for airline tickets and book flights of 1 airline: select the date to find, choose the destination, select the type of flight fly 1 way or round trip. - Every day there can be many different flights in terms of hours, in terms of flight class (business, economy) - Users can book tickets without logging in members. - Allow customers to review their booking information. If you are a logged-in customer, you will be able to show your full ticket purchase history, if you are not logged in , you need to enter your booking code to view the information ticket purchase news. | <ul style="list-style-type: none"> - Manage flight information . - Manage customer lists - Manage customer ticket purchase history - Income statistics, statistics on the number of tickets sold... - Note: airfare can be changed at any time before flight time, customers |

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| | | <ul style="list-style-type: none"> - Customers who log in are saved personal information to automatically fill in the form every time they book. | |
| 2 | Online hotel booking website | <ul style="list-style-type: none"> - Refer to http://agoda.com/ - Description: Build a website for 1 high-end hotel, allow customers to book rooms, the hotel side allows room management and management booking reason ... - Functions: - Similar to the flight booking page, which performs functions that allow customers to book rooms of 1 hotel: - Select a date and select the number of rooms to book. - Search results show different room types, each with different characteristics and prices - Allows to choose more breakfast services, airport transfers - Customers can make reservations without logging in (just like the topic of booking flights). - Customers are allowed to review their booking information. (same as the topic of booking flights) - Customers who log in can edit their personal information to automatically fill in the form every time they book. | <ul style="list-style-type: none"> - Information management of ks' rooms. - Manage customer lists - Manage booking history - Income statistics, bookings ... |
| 3 | Online movie booking website | <ul style="list-style-type: none"> - Refer to http://www.cgv.vn/ - Description: Build a website for a movie studio such as CGV, including | <ul style="list-style-type: none"> - Manage lists of movies, theaters, movie schedules |

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| | | <p>many theater clusters. Show customers movie information and book tickets online. The theater management side can see the booking history, manage movie information....</p> <ul style="list-style-type: none"> - Features: - Allows users to see a list of movies being shown, upcoming movies, detailed information of each movie, movie trailers. - Allows users to book tickets and select packages. Users must be logged in to book tickets. - There are different types of tickets: 2D, 3D, 4DX... - Users are allowed to review booking history, personal information. | <p>(which theater shows which movies at what time).</p> <ul style="list-style-type: none"> - Customer Management - Manage booking history - Income management, booking statistics ... |
| 4 | Video sharing and management website | <ul style="list-style-type: none"> - Refer to: www.youtube.com - Description: Build a website that allows video sharing and interaction between YouTube-like users . - Features: - Allows users to post videos and group videos into playlists. - Allow uploading videos by uploading files or YouTube links. - Allows video sharing or private mode . - Allows interaction between users: watching videos, viewing profiles, commenting on videos. - It is possible to search videos by title, search for users. - Users have their own video management page, update basic information, thumbnails each video ... | <ul style="list-style-type: none"> - Manage users - Manage categories - Have the right to choose any video to be a "feature video" displayed on the homepage of the website (just like youtube's suggested video). - Have the right to review videos, block infringing videos, set up some general information for the whole system: limit the size of uploaded videos , limit the duration of each video upload... |

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| 5 | Webmail | <ul style="list-style-type: none"> - Refer to: mail.google.com - Description: build email websites like email services like Google. This is just a simulated website, so there is no need to send emails outside the system, just send emails within the system together. - Function: - Users log in and perform the basic functions that web mails have: inbox, sent messages, email. - Indicates that the story has been read and not read, starred markup, unread markup, deleted emails... - Send email allows attachment, allows sending multiple people at the same time, supports CC and BCC features, forward mail ... - Other functions such as: filtering emails and different folders, forwarding emails to other accounts (same system). | <ul style="list-style-type: none"> - User management - Manage bad keywords to prevent emails with bad content. - Basic admin settings: set the maximum number of recipients of 1 email, maximum size of 1 email, limit the maximum number of attachments, content the maximum amount of emails... - Have the right to lock the account of 1 user. |
| 6 | Mobile app store website | <ul style="list-style-type: none"> - Referto: play.google.com - Description: Build a website for users to download mobile applications, download apk files directly, how to work similarly to Google Play, AppVn. - Function: - Users are entitled to search for applications, view applications in different categories. - If the user logs in, he can mark his favorite application, download the application (apk file). - View details of each application (information, number of downloads, | <ul style="list-style-type: none"> - User management - Manage the application of the user, add statistics of the application. - Approve newly posted apps before appearing on the store, with the right to block infringing apps. - Manage comments from apps - View statistics of the whole system on |

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| | | <p>size ...), comments and votes for applications.</p> <ul style="list-style-type: none"> - Upload applications, when uploading must provide all the necessary information of 1 application: description, image, installation file , select specialized sectionUpload must wait for admin approval to be uploaded. - The website needs an app ranking (loads a lot, new...) arranged according to many different criteria. - My personal page lists my applications, views bookmarks, views the statistics of the applications I upload . | <p>many different criteria: about users, about applications about downloads....</p> |
| 7 | Website to watch movies online | <ul style="list-style-type: none"> - Refer to: online movie watching sites. - Allows users to select movies according to each genre, search for movies. - The main page shows nominated films, new films.. - The detail page shows movie information, actors, directors, trailers, reviews, star ratings , showing similar films. - If the user is logged in, it is allowed to comment and rate, bookmark favorite movies. | <ul style="list-style-type: none"> - Manage movie genres - Film information management - User management - Manage comments |
| 8 | Online music website | <ul style="list-style-type: none"> - Refer to: https://zingmp3.vn/ - Description: Building a music website that works like services like Zing, Nhaccuatui ... - Features: | <ul style="list-style-type: none"> - Manage categories - Manage songs - User management , comments - Manage track listings on the |

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| | | <ul style="list-style-type: none"> - Select songs by category, by search, by compilation list (top good songs, selected ...) - Search for songs by various criteria - Listen to music and download music, watch lyrics, see other people's comments... - If you log in, you can comment, rate songs, bookmark good songs, add songs to your playlists. | homepage (top good songs, create monthly charts)... |
| 9 | Job search website | <ul style="list-style-type: none"> - Refer to: https://www.jobstreet.vn/ - Description : Job search and recruitment website. There are 2 types of users: company and job seeker. Companies (companies) post jobs, job seekers (CLIENTS) find jobs and apply. - CLIENT has the right to find jobs in many categories, by workplace. - CLIENT view job details, job description, requirements, salary - CLIENT after logging in can: apply to a job, manage personal information, CV, view the list of applied jobs pending approval . And see the feedback on the CTY side. - bookmark the work you care about. | <p>The company needs to have the following functions:</p> <ul style="list-style-type: none"> - Job posting, job description, requirements, quantity - Receive application information from CLIENT, view resumes and feedback on whether or not to agree to an interview |
| 10 | Online file storage service website | <p>Reference: One Drive</p> <ul style="list-style-type: none"> - Description: Build a Google Drive-like file management and sharing page. <p>Features:</p> <ul style="list-style-type: none"> - Allows users to store their files on the system, create different folders and upload data to the system - File folder management | <ul style="list-style-type: none"> - Manage users - Set some information for the whole system: maximum size per file, maximum size per account, files not allowed to be uploaded ... |

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| | | <ul style="list-style-type: none"> - Share data for different users: via username or via link - Allows uploading multiple files at the same time, uploading by drag and drop, when uploading shows the progress bar showing the progress of the upload process . - Allows saving other people's folders to their own folders (like Google Drive) - Set a password for the file when sharing. | <ul style="list-style-type: none"> - View data |
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II. OUTPUT REQUIREMENTS

Students submit **01** compressed file named **StudentID1_StudentID2_.... zip** (change **StudentID** to student code of team members) contains the following:

- **The report** (docx file , or latex , latex content and pdf) presents the analysis, system design, interface design section, and photographs of the designs. The interface is accompanied by an explanation and a link to the actual interface design (e.g. the link on FIGMA).
- **Self-assessment** (in the form): Evaluate the points for the corresponding criteria in the sample file. If the members have different levels of contribution , then score specific points for each team member. Members who only make reports and interfaces but do not participate in functional programming are only rated up to 5d for that member. At the end of the evaluation file is a **Job Roster** that clearly shows who did what part of the project.
- **Request survey** (word file): Contains a functional survey of the web being done.
- **The source directory** is the root directory of the project, containing all the source code, images, and other resources of the website. This source directory is equivalent to the `htdocs` directory in XAMPP software or `www` in WAMP software.
- Database file (**database.sql**): script file used to create databases, tables and initial data. **This file needs to contain a database creation statement** (the instructor can import it immediately without having to create a database first. You should import it on your machine first to make sure this file is definitely worked).

- **Readme.txt contains the** necessary descriptions so that the grader can set up the student's project and run the website on the grader's machine. In addition, it may also contain other information for marking for example admin login information , login of existing user accounts .

III. OTHER NOTES

- The functions listed in the description are just suggested functions, students rely on reference sites and other pages to understand the required features of the website they are implementing. Students must take the required survey step of their team's website to serve as a basis for implementing the topic, this part of the survey is also scored .
- **MySQL database, students doing static websites without databases get a maximum of 4 points.**
- Online references need to state the source.
- For ease of marking, admin and user both log in at the same interface. The admin's account is still stored in the database but uses a fixed value of **admin/123456**.
- The task of the essay is completely independent of the final project, so all members need to be involved in the work of both the essay and the final project. Essays graded by practicing instructors. The final project paper is graded by the theoretical lecturer.
- Teams are not allowed to share code with each other, do not get source code on the network and are responsible for protecting their own source code. Groups with the same source code (tested with specialized software) or the same on the network will get **0 points** (all members), regardless of which group shares the code and which group shares the code.
- Only use **PHP** programming language, **HTML**, **CSS**, **Javascript** and **libraries such as Bootstrap, jQuery, php or javascript** libraries to serve some other small functions (e.g. library for sending emails, creating OTP). **Do not use any other programming languages or frameworks (for example, do not use React, Angular, VueJS, do not use PHP frameworks such as Laravel, Cake, Zend ...)** .
- The website source code needs to be located at the root directory on the web server and accessed by the <http://localhost> path. **Do not** place the source code in subdirectories such as <http://localhost/web> or <http://localhost/do-an> or <http://localhost/finalproject> or other urls like that.

- **Minus** points will apply to the following cases:
 - Less than 3 days late: **When submitting late, students do not need to send an email to the lecturer. Every 1 day late, 1 point is deducted, less than 1 minute late is also counted as 1 day.**
 - Late submission of 3 days or more: the paper is not scored (**0 pts (points)**).
 - Incorrect submission as in the output request: **-1 pts** (without submitting an assessment, **-2pts**)
 - Wrong submission of other requests: no database file (or with but import syntax error), no / wrong information full name of members, source code not organized in the way required in section II, database configuration in everywhere in the project: **-1pts**
 - The database has too little data or unreasonable data: **-1pts**

IV. DETAILED SCALE

| Criteria | Describe | Self-assessment |
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| Word report book (Max 2pts) DO NOT PRINT | <p>No reports (0 pts)</p> <p>Sloppy reports or most copies online (0.25 pts)</p> <p>The report only presents theoretical issues or has little content to present about their project (0.5pts)</p> <p>The report adequately and reasonably presents the following sections: Introduction of the topic, theoretical basis (or problems related to the project), analysis and design, reality, results achieved. (Each part is valid for 0.25d, maximum 1pts)</p> <p>Have full citations of references, have a list of pictures, tables, references (plus 0.25pts)</p> <p>Correct and reasonable presentation of diagrams in the design analysis (plus 0.5pts)</p> <p>Correct and reasonable presentation of the reality part (plus 0.25pts)</p> <p>Report many redundant images, many redundant code images (except 0.25pts)</p> <p>Reasonable presentation according to the above request but not good form (wobbly font, wobbly margins) (except 0.25pts)</p> <p>* "Reasonable" is talking about the content of the presentation, students self-assess the level, the teacher will reassess after marking.</p> | <i>Students score their self-assessment points here when submitting papers</i> |
| Functions, Source code PHP (Up to 3 pts) | <p>Completely online reference (0d rating for the whole project)</p> <p>Perform 50% of the functions of the topic (0.5pts)</p> <p>Perform all the required functions of the topic (1pts)</p> | |

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| | <p>Incomplete implementation of administrative functions or difficult-to-use administrative functions plus 0.25 pts, if fully performing administrative functions and easy-to-use and convenient administration functions, plus 0.5 pts.</p> <p>Source code in the project if written according to your own understanding (plus 0.25 pts)</p> <p>Where are the modules that write their own code without reference (plus 0.25 pts)</p> <p>Use the MVC model or equivalent or divide the modules reasonably by the parts in the project (plus 0.25 pts)</p> <p>Source code with full clear notes (plus 0.25 pts)</p> <p>Optimally applied to the source to make the application run faster (plus 0.25 pts)</p> <p>Sloppy code (except 0.25 pts)</p> <p>The function is performed correctly in all cases, with fault tolerance (plus 0.25 pts)</p> <p>If the function is sufficient but runs sometimes there are errors, there are errors, subtract 0.5 pts</p> <p>Show the status of the work being processed on the interface (such as the process bar) (plus 0.25 pts)</p> <p>(If you copy some code but do not specify the source, students will get 0 points for the whole project)</p> | |
| Interface (Up to 2 pts) | <p>Get the full available interface (0pts)</p> <p>Use an existing interface but edit it to suit the project or design yourself but bad (0.25pts)</p> <p>Self-Design interface without blueprints (0.5pts)</p> <p>Design yourself, make the interface according to the design, and submit the design as proof (1pts)</p> <p>Responsive self-design interface (plus 0.25 pts)</p> <p>Self-design interface allows custom interface in setup or easy interface change (plus 0.25 pts)</p> <p>Beautiful interface and clearly shows the content of the project (plus 0.25 pts)</p> <p>Reasonable partial layout, easy to switch between controls, with shortcuts to quickly access functions (plus 0.25 pts)</p> | |
| Survey requirements (Max 1.5 pts) | <p>No survey or no submission (0 pts)</p> <p>Incomplete survey (0.5 pts)</p> <p>Full survey and detailed description of each feature of the reference system (1 pts)</p> | |

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| | <p>Have specific interpretation and analysis of each survey feature of the reference system (plus 0.25 pts)</p> <p>State the direction of solving and building features into the team's project (public 0.25 pts)</p> <p>Late submission of survey (except 0.25 pts)</p> | |
| Databases (Max 1.5 pts) | <p>No database (0 pts, maximum price 4 pts for the whole project)</p> <p>Database design lacks or has the wrong relationship (0.75 pts)</p> <p>Database Enough minimum tables to store information in the project (1 pts)</p> <p>There are improvements in the database for faster retrieval, running fewer queries and still having enough information (plus 0.25 pts)</p> <p>There are methods to ensure data security and support data recovery in the application. (plus 0.25 pts)</p> <p>The design database is different from the actual database in the project (except 0.25 pts)</p> | |
| Advanced features (bonus) (Max 1d) | <p>Use multithreading and good synchronization management of threads (0.5 pts)</p> <p>Have a network program (socket) to communicate with a server or other application (plus 0.25 pts)</p> <p>Programmatically connect to external devices such as printers, or connect to available services such as online payment, email, sms (plus 0.25 pts)</p> | |
| Total score | (if the sum is greater than 10, take 10) | ? |

Note: In each criterion, the part that does NOT write the word "plus / minus" can only be selected 1 level, the part with the word "plus / minus" in the score is the plus or minus point in the evaluation score and can choose many criteria if satisfactory.

V. DOs AND DON'Ts

- When students go to report, the reporting website should be the final and most complete version, full of data. For example, the air ticket page must have a lot of information about where to go, many flights for many days. Movie watch pages must have many genres, many movies. The video sharing page must have many users and each user has multiple videos that have been posted... to make the content of the report more intuitive. Avoid the situation where students report projects

that on the website there are only a few videos and students answer that "yes, I haven't added a lot, but it's not easy, teacher". **Students who complete the website but have little data only get a maximum of 8 points.**

- When asked to say "manage flight information", students understand themselves as managing all flight-related information such as: showing flight lists, adding, deleting, editing flight information. Students can do additional features such as pagination, search ...
- The topic cannot describe in too much detail every word about how to do it correctly, students must refer to their own functions/interfaces and experience using other websites to apply to the assignment. If the function runs but there are unreasonable points or security errors, it has not been evaluated to the full score. Here are some examples:

1. When a user actively changes a password:

- Do not do it correctly: enter the old password and the new password once.
- Do it right: enter the old password once and the new password twice (these are self-understood, which can be inferred by itself when using the other sites).

2. When viewing profile information

- Incorrect: display full profile information but write code using GET parameters such as `/profile.php? userid=1234`, where 1234 is the id of the current user. Then anyone can see other people's profiles just change the id in the address bar.
- The right way to do it: save the id information in the php session and only display the address in the form `/profile.php`. Then only the logged-in user can see the profile and at the same time they can only see their own.

3. When displaying the amount in the web interface

- Incorrect: how many are displayed, for example 65 million is displayed as "*balance: 65000000*"
- The right way to do it: use a comma to separate every 3 characters and display the unit, for example "*balance: 65,000,000 đ*"

Deadline: 23:59 Wednesday 08/05/2024

Enjoy 😊

Email: tg_phamthaikytrung@tdtu.edu.vn for any question.