

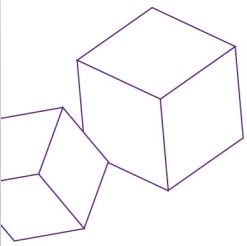
WorldSkills Asia Online Friendly Skills Games 2021

**IT Software solutions for
business**

TEST PROJECT

General Requirements





Introduction

To complete the tasks, you can use any of the tools provided according to the Infrastructure List.

If there is not enough time to complete all the remaining tasks, you can skip some tasks and complete others. However, you are expected to provide the most complete work at the end of each session to facilitate the assessment of your work.

Rules

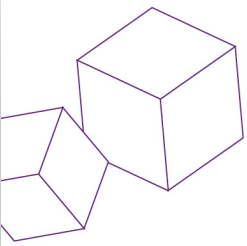
During the skill competition the following rules must be observed.

- You may not use any offline documentations, books, mobile, photo, audio, and video taking devices, or storage devices in or around the workstation.
- You may not use Bluetooth or other wireless devices in or around the workstation.
- You may not have anybody including translators or interpreters present in the room where the competition is being held.
- You may only use wired headphones connected to your workstation to listen to music. The music needs to be stored on the desktop folder.
- You may not access the internet in any form except to stream as required or to translate words and sentences from the test project on the workstation where it is streamed on YouTube.
- Interpreters may be used in order to address issues with the WM or experts from other countries.
- Use of pen and blank pieces of paper to take notes are permitted as long as they stay in the room where they are visible on the cameras.
- Personal input devices (keyboard, mouse, trackball, etc.) are allowed; however, such devices must be wired and nonprogrammable, they must work without installation of additional drivers (compliance with these requirements is pre-checked by a technical expert).
- Personal means of improving ergonomics (mouse pad, wrist rest, etc.), and talismans are allowed (they are also checked by a technical expert).
- In case of any abnormal situation related to software or hardware/peripheral devices, you must immediately interrupt the work and contact a non-compatriot expert, or an organizer.
- Moving any means of information without consent from organizers from the local computer to remote VM provided by the organizers are prohibited and are logged and monitored.
- All streams are monitored in real-time, and also archived for future review and the organizers may disqualify competitors if any of the rules of conducts are violated.

Failure to follow these rules may result in your removal from the competition.

Application name

Please use appropriate names for your applications and files. For example, the name of a desktop application must include the customer-company name.



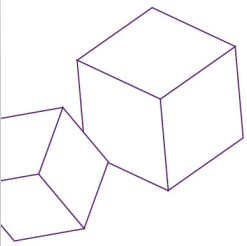
File structure

The project file structure should reflect the logic of your application. For example, there should be different directories for forms, custom visual components and entity classes.

Style guide

The visual components must comply with the Style Guide provided as the resources for the tasks in the appropriate file. Please ensure that the requirements of all components are met in the following areas:

- colour scheme,
- logo placement,
- use of fonts,
- setting the application icon.

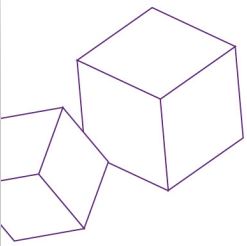


Layout and specifications

All system components must have a consistent look and feel in accordance with the style guide. Also, the following requirements must be met:

- layout and design: scalable layout is preferred; a limitation on the minimum window size should be applied; the ability to resize the window, where necessary, should be implemented; along with an increase in the size of the window, the size of the content part should increase (for example, a table with data from a database);
- grouping of elements (into logical categories);
- using appropriate controls (e.g., drop-downs to display values from the database);
- arrangement and alignment of elements (labels, input fields etc.);
- sequential element switch focus transition (by pressing TAB);
- the overall layout being consistent, clear and easy to use;
- a consistent interface that allows users to navigate between existing windows in the application (including in the opposite direction, for example, using the Back button);
- appropriate titles in each application window (there should be no default values of MainWindow, Form1 etc.).

All provided layouts are just an exemplary arrangement of elements, so you don't need to follow it pixel-to-pixel. Most specific instructions will be given in the Test Project directly (including Style Guide document).



User feedback

It is necessary to notify the user about errors or prohibited actions within the task, ask for confirmation before deleting, warn about irreversible operations, inform about the absence of search results etc. Message windows of the corresponding types (for example, Error, Warning, Information) should be displayed with an appropriate title and a pictogram. The text of the message should be useful and informative, it should provide complete information about the user's mistakes and the procedure for correcting them. You can also display visual tips for users as they enter data.

Error handling

Do not allow the user to enter incorrect values in the text fields for entities. For example, this check is necessary if the data type or the size of the field does not match the entered value. Notify the user of their mistakes.

Note the use of absolute and relative image paths. The application should work correctly, including when moving the folder with its executable file.

When an unexpected error occurs, the application should not crash.

Code style

The identifiers of variables, methods and classes must reflect their essence and/or purpose of their use, including the names of controls (for example, you cannot use the default values of Form1, button3 etc.).

Identifiers must conform to the Code Convention and the CamelCase (for C#, Java and 1C) and snake_case (for Python) styles.

Only one command per line is allowed.

Comments

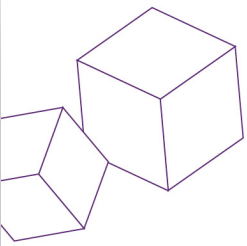
Add comments for non-obvious code snippets.

Quality code is perceived as plain text. Do not add comments for obvious code snippets. Comments should only be present where additional clarification is required.

Use the type of comments with appropriate tags (for example, param, return(s), summary etc.) that will later allow you to generate XML documentation.

Assessment

Each task is evaluated by testing the required functionality that has been implemented. The requirements for the implemented system are very high; therefore, it is possible that tools for automated testing of the application will be used. In this regard, during development, it may be necessary to follow certain rules for naming and structuring your project.



Presentation of results

All results should be transferred to the customer by uploading the files to the provided GIT version control repository. The results are as follows:

- application source code (as a commit of the current project version but not archived),
- other graphic/text files.

When evaluating your work, only the contents of the repository will be considered. When evaluating, only electronic notes are considered (readme.md). Handwritten notes will not be included in the assessment.

The repository must contain a description in Markdown format (see the templates in README-Template.md). Also please fill in additional information about the project and how to launch the application in the readme.md file.

Please note that you will not have additional time after the end of the session to save your files, so be vigilant and upload the results of your work in a timely manner within the session.