

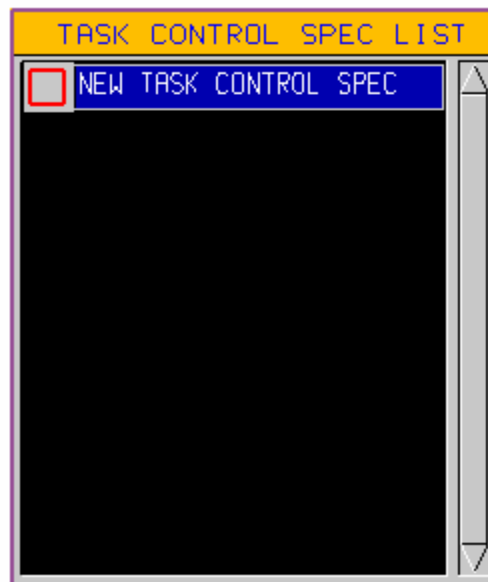
CHAPTER 3: THE VSE LANGUAGE

This task involves a simple program where we need to enter a password to enter “VSE WORLD”. The program gives you three chances to enter the correct password. If you are successful within the three given chances you enter, else you are denied an entry.

In the previous chapter, a “resource” is not used. In this chapter we shall see how to use the resource and connect the resource to the process. We shall also look at other buttons that are generally used when working on a Task. You can begin with the Password Program.

Step 1: Building the Skeleton.

Let’s start with creating the Task. Click on the Task button and the following window appears:



In the above window you have to select "NEW TASK CONTROL SPEC" in order to start with a new Task. Let’s start a new program and name the task 'GUESS'. You should remember how to do this from the previous chapter.

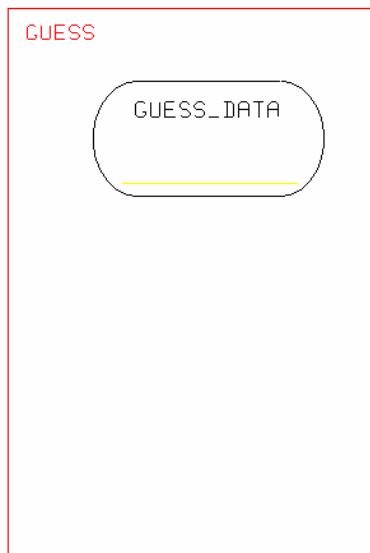
Next, you have a new element called a Resource. You need to create a resource to store any data to be used in the program. Click the cursor on the RESRC button and next click it again inside the Task Box.



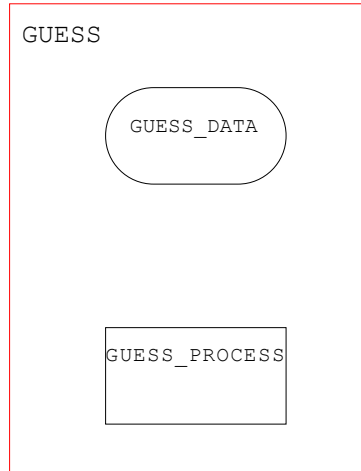
This immediately pops up a box like the one below, and VSE prompts you to name the resource and provide comments. Let's name it as 'GUESS_DATA'. Once again remember "name" is mandatory and "comments" are optional. Then click on SAVE button to continue further.

A dialog box titled "CREATE RESOURCE" with a purple border. It contains a "RESOURCE NAME:" label, a text input field with "GUESS_DATA" entered, two empty text input fields, a "COMMENT:" label, and three empty text input fields. At the bottom are "SAVE" and "CANCEL" buttons.

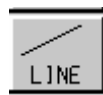
This gives us a picture of the Task Box with the Resource Box:



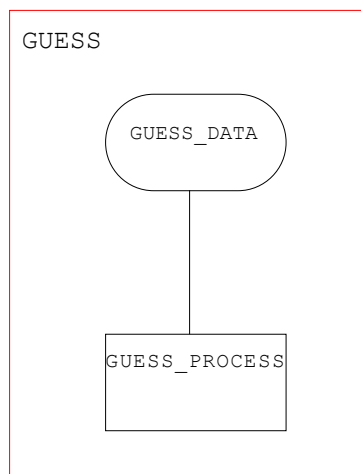
Now recall how to create a Process Box discussed in the previous chapter. Follow the same steps, and call it 'GUESS_PROCESS'. Once that is done, you get a picture of the Task Box like the one below. Here, you can lay the ground for separating DATA from INSTRUCTIONS.



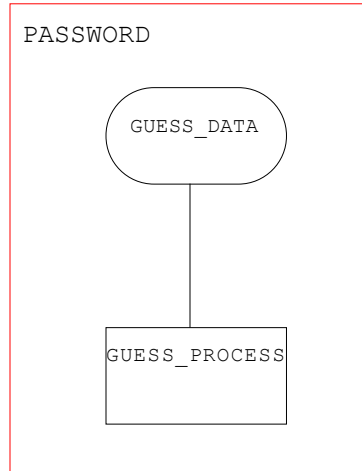
Now establish the connection between DATA and INSTRUCTIONS. Click on the LINE button.



This produces pins all round the Resource Box and the Process Box. Hit on any pin on the Resource Box and then on any pin on the Process Box and connect them both with a line. This creates a connection between both, and our Task Box picture will look like this. Here you completed building the skeleton.



Now, suppose you wanted to change the task name “GUESS” to "PASSWORD". Just select the Task Box and hit the MODIFY button. VSE takes you back to the window where you initially named it. Just change the name to “PASSWORD”. In a similar way change the names of resource and process. Our final figure appears like this:



Step 2: Building the Code.

Now that you know how to modify the “control specification”, go ahead and make the changes. Double click on the Resource Box. This opens an editor named GUESS_DATA.RES. You should write the code starting in column 5. Here we declare each variable in a separate level. It’s the highest level 1. In our program, we need 3 integer type variables X, I, and CODE. Each one is declared as an integer. Just typing 'INTEGER' after the variable will do the job.

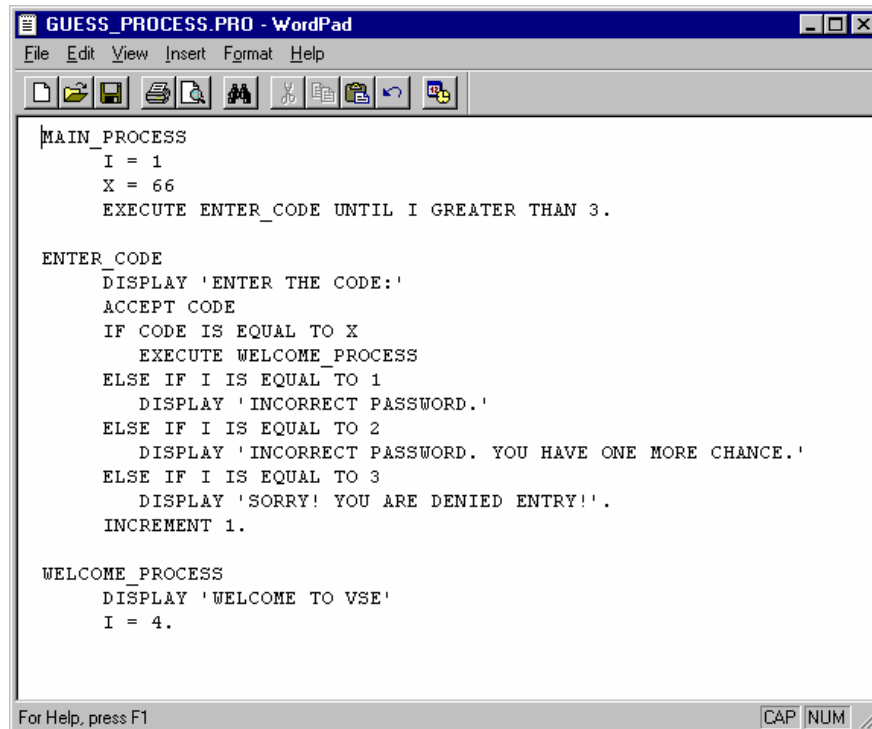
Our GUESS_DATA.RES will look like the one below. Use stars to comment the code as shown above. SAVE the file and CLOSE it.

```
***GUESS_DATA RESOURCE

GUESS_DATA
  1 I      INTEGER
  1 X      INTEGER
  1 CODE   INTEGER
```

Now you need to develop the code for the actual process. Double click on the Process Box and open up an editor window called GUESS_PROCESS.PRO. Here we need to write the actual code of the program. In this program the logic is simple. When we execute the Task it needs to prompt for the “password”. The user is given three chances to enter the correct password. If it is the same as the password in the program (here 66) the user can enter the “WORLD OF VSE”.

Finally our GUESS_PROCESS.PRO will look like this:



```
MAIN_PROCESS
  I = 1
  X = 66
  EXECUTE ENTER_CODE UNTIL I GREATER THAN 3.

ENTER_CODE
  DISPLAY 'ENTER THE CODE:'
  ACCEPT CODE
  IF CODE IS EQUAL TO X
    EXECUTE WELCOME_PROCESS
  ELSE IF I IS EQUAL TO 1
    DISPLAY 'INCORRECT PASSWORD.'
  ELSE IF I IS EQUAL TO 2
    DISPLAY 'INCORRECT PASSWORD. YOU HAVE ONE MORE CHANCE.'
  ELSE IF I IS EQUAL TO 3
    DISPLAY 'SORRY! YOU ARE DENIED ENTRY!'.
  INCREMENT 1.

WELCOME_PROCESS
  DISPLAY 'WELCOME TO VSE'
  I = 4.
```

SAVE and CLOSE the window.

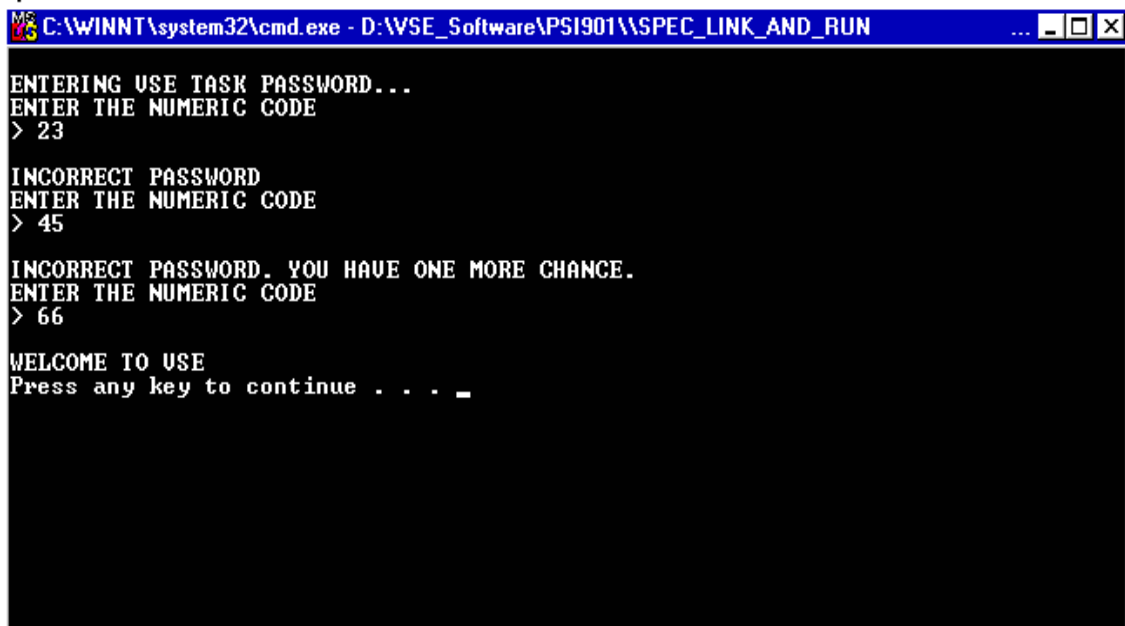
Step 3: Running the Task.

Now comes the final part of preparing and running the task. How to PREPARE a task is discussed in the previous chapter. First prepare the resource and then the process and finally the whole task before we click the RUN button.

To correct any incorrect code you need to double click on the Resource Box or Process Box; or select the Box and hit on EDIT button. After correcting the code you redo the preparation of the program.

After you successfully complete PREPARE, hit the RUN button.

A window like the one below pops up prompting you to "ENTER THE NUMERIC CODE". You enter the code and then hit the Return button on the keyboard.

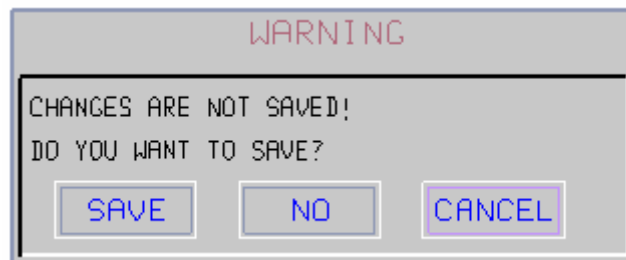


This is a sample run of the Task. Thus we come to the end of running the Task.

Let us see how to close the Task. We have the CLOSE button, which appears as below at the left bottom corner of the window on the tool bar.



Select the Task to be closed and click on the CLOSE button. It gives a message as shown below before closing if the changes are not saved.



VSE prompts you to save the current task if changed since the last SAVE, then clears the task.

Now lets exit VSE. You have EXIT button as show below at the left bottom corner of the VSE window on the tool bar.



Click on the EXIT button to exit VSE.