**6SENG006W Concurrent Programming**

**FSP Process Composition Analysis & Design Form**

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| **Name** |  |
| **Student ID** |  |
| **Date** |  |

**1. FSP Composition Process Attributes**

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| --- | --- |
| **Attribute** | **Value** |
| **Name** |  |
| **Description** |  |
| **Sub-processes**  (List them.) |  |
| **Number of States** |  |
| **Deadlocks**  (yes/no) |  |
| **Deadlock Trace(s)**  **(If applicable)** |  |

**2. FSP "main" Program Code**

The code for the parallel composition of all of the sub-processes and the definitions of any constants, ranges & process labelling sets used. (Do not include the code for the individual sub-processes.)

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| **FSP Program:** |
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**3. Combined Sub-processes**

(Add rows as necessary.)

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| **Process** | **Description** |
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**4. Analysis of Combined Process Actions**

* **Alphabets** of the combined processes, including the final process labelling.
* **Synchronous** actions are performed by at least two sub-process in the combination.
* **Blocked Synchronous** actions cannot be performed, because at least one of the sub-processes can never preform them, because they were added to their alphabet using alphabet extension.
* **Asynchronous** actions are preformed independently by a single sub-process.

Group actions together if appropriate, e.g. if they include indexes in[0], in[1], …, in[5] as in[1..5]. Add rows as necessary.

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| **Processes** | **Alphabet**  (Use LTSA's **compressed notation**, if alphabet is large.) |
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| **Synchronous Actions** | **Synchronised by Sub-Processes (List)** |
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| **Blocked**  **Synchronous Actions** | **Blocking Processes** | **Blocked Processes** |
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| **Sub-Processes** | **Asynchronous Actions (List)** |
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**5. Parallel Composition Structure Diagram**

The structure diagram for the parallel composition.

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