MODULES USED IN SIMULATION

CREATE MODULE

This module is intended as the starting point for entities in a simulation model. Entities are created using a schedule or based on a time between arrivals. Entities then leave the module to begin processing through the system. The entity type is specified in this module.

TYPICAL USES
- The start of a part's production in a manufacturing line.
- A document's arrival (e.g., order, check, application) into a business process.
- A customer's arrival at a service process (e.g., retail store, restaurant, information desk).

Prompt	Valid Entry	Default
Name— Unique module identifier. This name is displayed on the module shape.	Symbol Name [All modules]	<module name and instance number>
Entity Type— Name of the entity type to be generated.	Symbol Name [Entity Names]	Entity 1
Type— Type of arrival stream to be generated. Types include: Random (uses an Exponential distribution, user specifies mean), Schedule (uses an	Random (Expo), Schedule, Constant, Expression	Random

Exponential distribution, mean determined from the specified Schedule module), Constant (user specifies constant value, e.g., 100), or Expression (pull down list of various distributions).		
Value— Determines the mean of the exponential distribution (if Random is used) or the constant value (if Constant is used) for the time between arrivals. Applies only when Type is Random or Constant.	Real	1
Schedule Name— Identifies the name of the schedule to be used. The schedule defines the arrival pattern for entities arriving to the system. Applies only when Type is Schedule.	Symbol Name [Schedules]	Schedule 1
Expression— Any distribution or value specifying the time between arrivals. Applies only when Type is Expression.	Expression (Distributions)	1
Units— Time units	Seconds, Minutes,	Hours

used for inter-arrival and first creation times. Does not apply when Type is Schedule.	Hours, Days	
Entities per Arrival— Number of entities that will enter the system at a given time with each arrival.	Expression	1
Max Arrivals— Maximum number of arrivals that this module will generate. When this value is reached, the creation of new arrivals by this module ceases.	Expression	Infinite
First Creation— Starting time for the first entity to arrive into the system. Does not apply when Type is Schedule.	Expression	0.0

PROCESS MODULE

This module is intended as the main processing method in the simulation. Options for seizing and releasing resource constraints are available. Additionally, there is the option to use a "submodel" and specify hierarchical user-defined logic. The process time is allocated to the entity and may be considered to be value added, non-value added, transfer, wait or other. The associated cost will be added to the appropriate category.

TYPICAL USES
☐ Machining a part
☐ Reviewing a document for completeness
☐ Fulfilling orders
☐ Serving a customer