

**UCT31021 – PRACTICAL FOR ARTIFICIAL INTELLIGENCE**  
**DEPARTMENT OF ICT**  
**FACULTY OF TECHNOLOGY**  
**SOUTH EASTERN UNIVERSITY OF SRILANKA**

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**Labsheet: 06**

**Aims: Cut in PROLOG**

The cut in PROLOG, is a goal, written as !.

**Task 1: Double step function.**

Rule 1: *if  $X < 3$ , then  $Y = 0$*

Rule 2: *if  $3 \leq X$  and  $X < 6$ , then  $Y = 2$*

Rule 3: *if  $6 \leq X$ , then  $Y = 4$*

**Task 2: Finding Maximum**

$\max(X, Y, Max)$

*where*

$\max = X$  *if  $X \geq Y$  and*

$\max = Y$  *if  $X < Y$*

**Task 3:**

Create a knowledge base to find positive even numbers to the list.

*Hint: Given number is  $X$*

*If  $X$  is greater than zero and divisible by 2, then  $X$  is even number.*

**Task 4:**

John is the parent of Julia. Peter is the parent of John, Noah, Amal, and Perera. Paul is the parent of Peter, Sara, Walker, and Tailor. A parent is an ancestor for the children. Moreover, children can have a parent and an ancestor as their ancestor.

Create a knowledge base with relevant facts to represent the description using cut.