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Anexos

ANEXO A – Geração da seqüência de operações nos ambientes fJSP, iRS/OS e APS

Procedimento: Seqüenciamento de operações

Input: $o(), J, O_j^{PR}, O_j^{SU}, \pi$;

Output: s^*;

Início

  $s^* \leftarrow \emptyset, S \leftarrow \emptyset$;

  para $j = 1$ **até** J **faça**

    se $(O_j^{PR} = \emptyset)$ **então** $S \leftarrow S \cup \{o(j)\}$;

  fim para;

  enquanto $(S \neq \emptyset)$ **faça**

    $i \leftarrow \underset{o(j) \in S}{argmin}\, \pi(j)$;

    $s^* \leftarrow s^* \cup \{o(i)\}$;

    $S \leftarrow S \setminus \{o(i)\}$;

    para $j = 1$ **até** J **faça**

      se $(o(j) \in O_i^{SU})$ **então**

        $O_j^{PR} \leftarrow O_j^{PR} \setminus \{o(i)\}$;

        se $(O_j^{PR} = \emptyset)$ **então** $S \leftarrow S \cup \{o(j)\}$;

      fim se;

    fim para;

  fim enquanto;

Fim

Aqui, $o()$ é o conjunto de todas as operações; $o(j)$ é a j-ésima operação; J é o número de operações; O_j^{PR} é o conjunto de operações precedentes de $o(j)$; O_j^{SU} é o conjunto de operações sucessoras de $o(j)$; S é o conjunto temporal de operações disponíveis para acrescentar no seqüenciamento e s^* é a seqüência de operações gerada ao final do procedimento.

O procedimento começa com o conjunto S de operações sem precedentes. Enquanto $(S \neq \emptyset)$ ao parâmetro i será atribuído o índice da operação $o(j) \in S$ com menor $\pi(j)$ que é a operação com maior prioridade. A operação $o(i)$ será anexado na seqüência s^*. O conjunto S será atualizado excluindo a operação $o(i)$ e acrescentando as novas operações sem precedentes.

ANEXO B – Alocação de máquinas nos ambientes fJSP, iRS/OS e APS

Procedimento: Alocação de máquinas

Input: J;

Output: v^*;

Início

$v^* \leftarrow \emptyset$;

para $j = 1$ **até** J **faça**

Escolher ao acaso uma máquina $m|m \in A(j)$;

$v^* \leftarrow v^* \cup \{m\}$;

fim para;

Fim

Aqui, j é a j-ésima operação da seqüência de operações; J é o número de operações; $A(j)$ é o conjunto de máquinas disponíveis que podem processar a operação j e v^* é a alocação de máquinas resultante ao final do procedimento.

O procedimento atribui para cada operação j uma máquina m escolhida ao acaso dentro do conjunto $A(j)$.