

Manual do Usuário do HIPO

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Capítulo 1

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Capítulo 3

Introdução

Este projeto é baseado nas idéias do Prof. Dr. Valdemar W. Setzer (<http://www.ime.usp.br/vwsetzer/hipo/hipo-descr.html>), do Instituto de Matemática e Estatística da Universidade São Paulo (IME-USP). Como o objetivo deste manual é explicar o funcionamento do programa e não os conceitos envolvidos no HIPO, é fortemente recomendado que você leia a especificação original do HIPO.

Por se tratar de um projeto que se utiliza da linguagem Java, é necessário que a mesma esteja instalada no seu sistema. Informações de como instalar o Java Runtime Environment (JRE) ou o Java Development Kit (JDK) podem ser encontrados do site oficial da linguagem (<http://java.sun.com>).

3.1 Compilando o Projeto

Apesar de já haver uma versão compilada disponível para download, é possível também compilar você mesmo o projeto. Isso é útil para o caso de desejar realizar alterações no sistema. O projeto pode ser facilmente compilado utilizando o Apache Ant (<http://ant.apache.org/>), pois basta ir até a pasta raiz do HIPO e executar

```
# ant
```

O Apache Ant é normalmente instalado junto com várias IDEs como o NetBeans e o Eclipse, caso não o tenha instalado o mesmo pode ser encontrado na página oficial. Após o término da compilação, mova o **hipo.jar** para a pasta raiz do HIPO.

3.2 Tutorial

Este é um tutorial que tem como objetivo ensinar as operações do sistema. Seguindo você será capaz, desde que leia a explicação sobre o HIPO, criar e executar programas no HIPO.

3.2.1 Iniciando o Programa

Se você pegou a versão com código-fonte, você precisará compilar primeiramente o sistema, para isso leia **Compilando o Projeto**.

Para iniciar o programa basta executar um duplo-clique no arquivo **hipo.jar**. Caso isso não funcione, será necessário abrir o prompt de comandos do Windows ou o terminal do Linux/MacOS e então, após entrar na pasta do HIPO, execute:

```
java -jar hipo.jar
```

Atenção: É importante que o arquivo **hipo.jar** esteja na pasta raiz do HIPO por causa das subpastas que utiliza.

3.2.2 Carregando um Exemplo

O HIPO acompanha alguns programas já prontos de exemplo. Para abri-lo pressione o botão **Exemplos** na aba **Bem-Vindo** (um ícone com duas gavetas), ou então pressione o terceiro botão da barra de ferramentas, ou ainda acesse pelo menu através da opção **Exibir->Exemplos**.

Isso abrirá a aba de exemplos que lhe permite abrir qualquer exemplo apenas clicando sobre ícone ao lado do nome e a descrição de cada exemplo. Para o nosso tutorial abra o arquivo **Somando Inteiros.hsf**, uma nova aba será criada com o programa Somando Inteiros.

3.2.3 Executando o Programa

Para executar um programa, precisamos antes de tudo definir a posição inicial do programa. Isso pode ser feito através do campo **Posição Inicial**. Para o nosso exemplo a posição inicial é 1, isso fará com que ao executar o programa o mesmo comece da posição de memória 01.

Após setar a posição inicial, podemos executar o programa com um clique no botão de executar presente na barra de ferramentas (representado por um computador), pelo menu através de **Executar->Executar o Programa**, ou então através da tecla de atalho **F6**.

O programa atual começará a rodar e a tela se modificará para indicar a entrada e a saída do programa. Quando o programa receber um comando de impressão uma nova linha com a informação aparecerá no terminal, e quando o programa receber um comando para executar a leitura, o mesmo irá informar para entrar com um número no formato do HIPO e esperará que seja digitado um número na caixa de texto abaixo do conteúdo de entrada. Após digitar o número e pressionar Enter, o programa prosseguirá.

Para encerrar o programa a qualquer momento ou voltar para a edição após o término do mesmo pressione o botão **Parar**.

3.2.4 Alterando o Programa

Para alterar o programa, basta editar as linhas do mesmo executando um clique-duplo sobre o campo valor e alterando-o para o novo conteúdo. Por exemplo,

altere o valor da linha 06 para +5211 e então o programa irá somar números estritamente positivos até encontrar um número menor ou igual a zero e então terminar a sua execução. Para alterar um comentário, proceder da mesma forma.

Sempre que você mudar o valor de uma posição de memória o programa irá gerar um comentário automático para você, que pode ser mudado depois para explicar melhor o que ocorre nessa linha.

3.2.5 Depurando o Programa

A depuração (execução passo-a-passo) permite que erros sejam encontrados nos programas. Para depurar o seu programa basta clicar no botão **Depurar Programa** representado por uma engrenagem na barra de ferramentas. Assim que a depuração começar, uma linha azul indicando a instrução atual a ser executada será mostrada. Pressionando o botão **Passo** é possível executar a instrução corrente e avançar para a próxima.

Caso deseje continuar com a execução do programa como se tivesse sido executado normalmente através do botão **Executar Programa**, basta clicar no botão **Continuar** representado por uma seta.

Para encerrar o programa a qualquer momento ou voltar para a edição após o término do mesmo pressione o botão **Parar**.

3.2.6 Salvando e Abrindo um Programa

Para salvar um programa basta apertar o botão salvar. Uma tela aparecerá pedindo que você informe o nome do arquivo e a descrição do mesmo.

Todos os programas salvos aparecerem na aba **Abrir** e o processo de abertura do programa consiste simplesmente em clicar no símbolo ao lado do nome do programa salvo.