

Rules for Generating First and Follow Sets

<p>A. For each rule of the form</p> <p style="margin-left: 20px;">a. $\langle nt_i \rangle \rightarrow T_k \dots$</p> <p style="margin-left: 20px;">b. T_k is included in the first set of $\langle nt_i \rangle$</p>	<p>P =</p> <p>{</p>
<p>B. For each rule of the form</p> <p style="margin-left: 20px;">a. $\langle nt_i \rangle \rightarrow \langle nt_j \rangle \dots$</p> <p style="margin-left: 20px;">b. if T_k is a member of the first set of $\langle nt_j \rangle$ then T_k is included in the first set of $\langle nt_i \rangle$</p>	<p>1. $\langle program \rangle \rightarrow \mathbf{begin} \langle stmt_list \rangle \mathbf{end}$</p> <p>2. $\langle stmt_list \rangle \rightarrow \langle stmt \rangle \langle stmt_tail \rangle$</p> <p>3. $\langle stmt_tail \rangle \rightarrow ; \langle stmt_list \rangle$</p>
<p>C. For each rule of the form</p> <p style="margin-left: 20px;">a. $\langle nt_i \rangle \rightarrow \lambda$</p> <p style="margin-left: 20px;">b. if T_k is a member of the follow set of $\langle nt_i \rangle$ then T_k is included in the first set of $\langle nt_i \rangle$</p>	<p>4. $\langle stmt_tail \rangle \rightarrow \lambda$</p> <p>5. $\langle stmt \rangle \rightarrow \langle var \rangle = \langle expression \rangle$</p>
<p>D. For each rule of the form</p> <p style="margin-left: 20px;">a. $\langle \rangle \rightarrow \dots \langle nt_i \rangle T_k \dots$</p> <p style="margin-left: 20px;">b. T_k is included in the follow set of $\langle nt_i \rangle$</p>	<p>6. $\langle var \rangle \rightarrow \mathbf{A}$</p> <p>7. $\langle var \rangle \rightarrow \mathbf{B}$</p>
<p>E. For each rule of the form</p> <p style="margin-left: 20px;">a. $\langle \rangle \rightarrow \dots \langle nt_i \rangle \langle nt_j \rangle \dots$</p> <p style="margin-left: 20px;">b. if T_k is a member of the first set of $\langle nt_j \rangle$ then T_k is included in the follow set of $\langle nt_i \rangle$</p>	<p>8. $\langle var \rangle \rightarrow \mathbf{C}$</p> <p>9. $\langle expression \rangle \rightarrow \langle var \rangle \langle expr_tail \rangle$</p>
<p>F. For each rule of the form</p> <p style="margin-left: 20px;">a. $\langle nt_i \rangle \rightarrow \dots \langle nt_j \rangle$</p> <p style="margin-left: 20px;">b. if T_k is a member of the follow set of $\langle nt_i \rangle$ then T_k is included in the follow set of $\langle nt_j \rangle$</p>	<p>10. $\langle expr_tail \rangle \rightarrow + \langle var \rangle \langle expr_tail \rangle$</p> <p>11. $\langle expr_tail \rangle \rightarrow * \langle var \rangle \langle expr_tail \rangle$</p> <p>12. $\langle expr_tail \rangle \rightarrow \lambda$</p>
	<p>}</p>