USEFUL LATEX TEMPLATE

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1 CODE BLOCK

Use Listings package.

```
\usepackage{listings}
\usepackage{color}

\definecolor{dkgreen}{rgb}{0,0.6,0}
\definecolor{gray}{rgb}{0.5,0.5,0.5}
\definecolor{mauve}{rgb}{0.58,0,0.82}

\lstset{frame=tb,
language=Java,
aboveskip=3mm,
belowskip=3mm,
showstringspaces=false,
columns=flexible,
basicstyle={\small\ttfamily},
numbers=none,
numberstyle=\tiny\color{gray},
keywordstyle=\color{blue},
commentstyle=\color{dkgreen},
stringstyle=\color{mauve},
breaklines=true,
breakatwhitespace=true,
tabsize=3
}
```

You can change default language in the middle of document with 'lstsetlanguage=Java'.

- Example: Booth Algorithm in Verilog:

```
module booth_multi (A, B, P, CLK, reset)

input [7:0] A, B;
input CLK, reset;
output reg [15:0] P;
reg [7:0] N;
reg [15:0] N_prime;
reg [8:0] A_prime;
integer i;

always @ (posedge CLK)
begin
if (~reset) beign
P <= 16'b0;
A_prime <= {A, 1'b0};
end
else begin
for (i = 0; i < 8; i = i + 1)
```

```
begin
if (A_prime[1:0] == 2'b 01)
N <= B;
if (A_prime[1:0] == 2'b 10)
N <= -B;
N_prime <= {N, 8'b 0};
P  <= P + N_prime;
A_prime <=  A_prime >>> 1;
P <= P >>> 1;
end
end
end
```

2 FIGURE AND TABLE

Use the figure example below

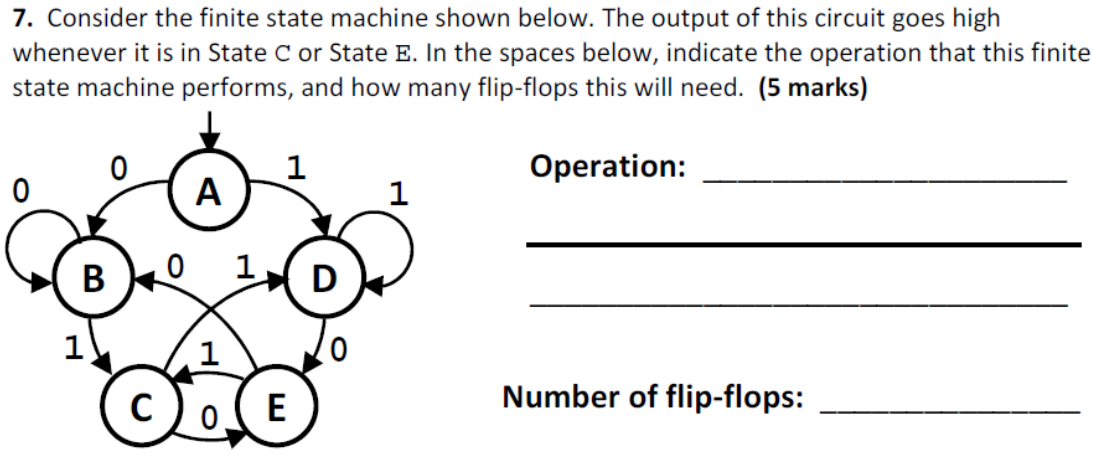

Figure 1: example pic

Table Example

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bito
00	Wang	Si	Tu	Shuo	Wo	Cong	Wei	Jian
01	Guo	You	Ru	Ci	Hou	Yan	Wu	Chi
10	Zhi	Tu	.	This	is	Horse	Fart	,
11	I	am	Comfortable	said	by	Zhuge	Cun	Fu

Table 1: A pseudo 4×8 bit Memory