**MARKS AWARDED: 98**

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\* CS1010 AY2011/2 Semester 2 Lab2 Ex2

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\* candles.c

\* find out how many candles can he burn in total,

\* given two positive integers n and k

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\* Loh Wan Xin

\* B02

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#include <stdio.h>

int count\_candles (int,int);

int main(void)

{

int num\_candles, num\_residuals, candles\_burn;

printf("Enter number of candles and \n"

"number of residuals to make a new candle: ");

scanf("%d %d", &num\_candles, &num\_residuals);

candles\_burn = count\_candles (num\_candles, num\_residuals);

printf("Total candles burnt = %d\n", candles\_burn );

return 0;

}

// Calculate the number of candles that can be burned

int count\_candles (int n,int k)

{

int residual\_left, count;

count = n; // Initialise count = Number of candles

residual\_left = n;

while (residual\_left>=k) //when residual wax is more than k,new candles can be rolled out

{

count=count+residual\_left/k; //adding new candles to the count

residual\_left = residual\_left/k + residual\_left%k;

}

return count;

}