

**WIA2005 Algorithm Design & Analysis**  
**Semester 2, 2016/17**  
**Lab 10**

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1. Implement the program that find the  $n^{\text{th}}$  Fibonacci number using dynamic programming approach.
2. Given an array of prices  $A = [1\ 5\ 8\ 9\ 10\ 17\ 17\ 20\ 24\ 30]$  where price at each index is the price obtained by selling rod of length equal to that index. Write a program that calculate the maximum price which can be obtained by selling pieces of that rod.
3. Given a set of non-negative distinct integers, and a value  $m$ , determine if there is a subset of the given set with sum divisible by  $m$ .

Example:

```
Input : arr[] = {3, 1, 7, 5};  
        m = 6;
```

```
Output : YES
```

```
Input : arr[] = {1, 6};  
        m = 5;
```

```
Output : NO
```