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|  | **DAILY ONLINE ACTIVITIES SUMMARY**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Date:** | **08/06/2020** | | | | | **Name:** | **Albin Francis** | | | **Sem & Sec** | **8th sem,A** | | | | | **USN:** | **4AL16CS008** | | | **Online Test Summary** | | | | | | | | | | **Subject** | | **SMS** | | | | | | | | **Max. Marks** | | **60** | | **Score** | | | **60** | | | **Certification Course Summary** | | | | | | | | | | **Course** | **PYTHON FOR DATA SCIENCE** | | | | | | | | | **Certificate Provider** | | | **Cognitive class.ai** | | **Duration** | | | **3.5hr** | | **Coding Challenges** | | | | | | | | | | **Problem Statement: Write a C Program to Generate All the Set Partitions of n**  **Numbers Beginning from 1 and so on** | | | | | | | | | | **Status: Solved** | | | | | | | | | | **Uploaded the report in Github** | | | | | **Yes** | | | | | **If yes Repository name** | | | | | **albinfrancis008** | | | | | **Uploaded the report in slack** | | | | | **Yes** | | | |   Online Test Details: (Attach the snapshot and briefly write the report for the same)  sms08.png  Certification Course Details: (Attach the snapshot and briefly write the report for the same  python.png  Coding Challenges Details: (Attach the snapshot and briefly write the report for the same) |
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/\*Write a C Program to Generate All the Set Partitions of n Numbers Beginning from 1 and so on\*/

#include<stdio.h>

void printArray(int p[], int n)

{

for (int i = 0; i < n; i++)

printf("%d ",p[i]);

printf("\n");

}

void partition(int n)

{

int p[n], true=1;

int k = 0;

p[k] = n;

while (true)

{

printArray(p, k+1);

int rem\_val = 0;

while (k >= 0 && p[k] == 1)

{

rem\_val += p[k];

k--;

}

if (k < 0) return;

p[k]--;

rem\_val++;

while (rem\_val > p[k])

{

p[k+1] = p[k];

rem\_val = rem\_val - p[k];

k++;

}

p[k+1] = rem\_val;

k++;

}

}

int main()

{

int n;

printf("Enter the number: ");

scanf("%d",&n);

partition(n);

return 0;

}