Arhitectura Sistemelor de Calcul

Quiz navigation

1 2

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Time left **0:16:22**

Question **1**

Not yet answered

Not graded

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Incarcarea fisierului PDF corespunzator solutiei problemei se va efectua in timpul total de lucru afectat acestei probe. Dupa acest timp nu se mai pot incarca fisiere si solutia nu se va putea lua in considerare sub nici o forma!

The PDF file corresponding to the solution of the problem will be uploaded during the allocated time for this quiz. After this time no uploading will be possible and the solution will not be taken into account under any circumstances!

- [ ] Am incarcat fisierul PDF.

  I have uploaded the PDF file.

- [ ] Nu am incarcat fisierul PDF.

  I have not uploaded the PDF file.

Question **2**

Not yet answered

Marked out of 3.40

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a) Sa se scrie in modulul **a.asm** o procedura in limbaj de asamblare numita **conversie** care transforma un sir de caractere (format exclusiv din codurile ascii ale unor cifre zecimale) in numarul corespunzator. Procedura primeste ca date de intrare adresa sirului de caractere si lungimea sirului. Rezultatul obtinut va fi reprezentat pe un dublucuvant.

Exemplu: pentru datele de intrare "256" si 3, prin apelul procedurii conversie se va obtine rezultatul 256.

b) Sa se scrie in modulul **b.asm** o procedura in limbaj de asamblare numita **verificareIP** care furnizeaza ca rezultat:

- 1, daca sirul de caractere primit la intrare reprezinta o adresa IP corecta, adica respecta formatul A.B.C.D (cu A,B,C,D numere intregi reprezentate pe cate un octet in interpretarea fara semn)
- 0, in caz contrar.

c) Sa se scrie in modulul **main.asm** un program in limbaj de asamblare care printr-o singura citire de la tastatura primeste o secventa de siruri de maxim 1000 de caractere, separate prin virgula, ce respecta formatul A.B.C.D, elementele despartite prin "." fiind numere intregi reprezentate pe cate un dublucuvant in interpretarea fara semn. Programul va folosi procedurile de mai sus si va afisa sirurile citite care sunt adrese IP corecte.

Exemplu: Pentru citirea "0.0.10.1,256.11.11.11,192.168.10.2,11.2000.1.0" se afiseaza sirurile 0.0.10.1 si 192.168.10.2

Explicati si detaliati abordarea algoritmului si mecanismele implicate. Justificati si comentati corespunzator textul sursa.

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a) Create in module **a.asm** an assembly language procedure named conversie that transforms a string of characters (formed exclusively of the ascii codes of base 10 digits) in the corresponding number. The procedure receives as input data the address of the string of characters and the length of the string. The resulting number is represented on a doubleword.

Example: for the input data "256" and 3, by calling the conversie procedure the obtained result will be 256.

b) Create in module **b.asm** a procedure in the assembly language named **verificareIP** which provides as a result:

- 1, if the string received as input represents a correct IP address, that is, it respects the A.B.C.D format (where A, B, C, D are integers represented on a byte each in the unsigned interpretation)
- 0, otherwise

c) Create in the **main.asm** module an assembly program that, through a single read from the keyboard, receives a sequence of strings up to 1000 characters, separated by commas, that obey the A.B.C.D format, where the elements separated by "." are integers represented on a doubleword in the unsigned interpretation. The program will use the previous procedures and will display the strings that are valid IP addresses.

Example: For the input "0.0.10.1,256.11.11.11,192.168.10.2,11.2000.1.0" the printed result will be 0.0.10.1 and 192.168.10.2

Explain and detail the algorithmic approach and the involved mechanisms. Justify and appropriately comment the source code.

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◀ EXAMEN 20.01.2021 - Partea 1

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