

# Team Homework

Jorja Jonut  
Student '2

## Subject I

$$S = 211647_{(8)}$$

$$Y = 22417_{(8)}$$

$$P = 2ACB34C_{(16)}$$

$$f = 4_{(16)}$$

$$S - Y = \begin{array}{r} \overset{-1}{2} \overset{-1}{1} \overset{0}{1} \overset{0}{6} \overset{0}{4} \overset{0}{7} \overset{0}{7}_{(8)} - \\ \underline{2 \ 2 \ 4 \ 1 \ 7}_{(8)} \\ 1 \ 6 \ 7 \ 2 \ 3 \ 0_{(8)} \end{array}$$

$$it_1) 0 + 7 - 7 = 0$$

$$it_2) 0 + 4 - 1 = 3$$

$$it_3) 0 + 6 - 4 = 2$$

$$it_4) 0 + 1 - 2 = -1 < 0 \Rightarrow \overset{-1+8=7}{b = -1}$$

$$it_5) -1 + 1 - 2 = -2 < 0 \Rightarrow \overset{-2+8=6}{b = -1}$$

$$it_6) -1 + 2 = 1$$

$$P : f = 2ACB34C_{(16)} : 4_{(16)} = 0AB2CD3_{(16)}$$

$$\begin{array}{r} \underline{1} \\ 2A \\ \underline{1} \\ 2C \\ \underline{1} \\ 0B \\ \underline{1} \\ 33 \\ \underline{1} \\ 34 \\ \underline{1} \\ 0C \end{array}$$

$$it_1) 0 \cdot 16 + 2 = 2$$

$$2 : 4 = 0 \text{ r } 2$$

$$it_2) 2 \cdot 16 + A = 32 + 10 = 42$$

$$42 : 4 = 10 \text{ r } 2$$

$$it_3) 2 \cdot 16 + C = 32 + 12 = 44$$

$$44 : 4 = 11 \text{ r } 0$$

$$it_4) 0 \cdot 16 + B = 11$$

$$11 : 4 = 2 \text{ r } 3$$

$$it_5) 3 \cdot 16 + 3 = 48 + 3 = 51$$

$$51 : 4 = 12 \text{ r } 3$$

$$it_6) 3 \cdot 16 + 4 = 48 + 4 = 52$$

$$52 : 4 = 13 \text{ r } 0$$

$$it_7) 0 \cdot 16 + C = 12$$

$$12 : 4 = 3$$



Subiectul  
Subiect II (Student 2)

A20 +

288

6

1.

0,AAA

0,0E3

0,012

CAF, B9F

Forza  
Jonut

Group 914

$$b = 6$$

$$h = 16$$

$$x = 23011,421$$

$$23011,421_{(6)} = ?_{(16)} = CAF, B9F_{(16)} \Rightarrow y = CAF, B9F$$

$$\begin{aligned} & 2 \cdot 6^4 + 3 \cdot 6^3 + 0 \cdot 6^2 + 1 \cdot 6^1 + 1 \cdot 6^0 + 4 \cdot 6^{-1} + 2 \cdot 6^{-2} + 1 \cdot 6^{-3} \\ & \underline{A20} + \underline{288} + \underline{0} + \underline{6} + \underline{1} + \underline{0,AAA} + \underline{0,0E3} + \underline{0,012} \\ & \underline{6 \cdot 6 = 36 : 16 = 2 \text{ r } 4} = \underline{24}_{16} \end{aligned}$$

$$\underline{24 \cdot 6 = 144 : 16 = 9 \text{ r } 0}$$

$$\begin{array}{r} (16) \quad 6^2 \\ \underline{6} \\ 24 \end{array}$$

$$6 \cdot 6 = 36 : 16 = 2 \text{ r } 4$$

$$6_{(16)}^2 = 24_{(16)}$$

$$\begin{array}{r} (16) \quad 24^1 \\ \underline{6} \\ 08 \end{array}$$

$$4 \cdot 6 = 24 : 16 = 1 \text{ r } 8$$

$$6_{(16)}^3 = 08_{(16)}$$

$$1 + 2 \cdot 6 = 13 : 16 = 0 \text{ r } 13$$

$$\begin{array}{r} (16) \quad 5^3 \quad 08^2 \\ \underline{6} \\ 510 \end{array}$$

$$8 \cdot 6 = 48 : 16 = 3 \text{ r } 0$$

$$6_{(16)}^4 = 510_{(16)}$$

$$3 + 13 \cdot 6 = 81 : 16 = 5 \text{ r } 1$$

$$\begin{array}{r} 510^1 \\ \underline{2} \\ A20 \end{array}$$

$$0 \cdot 2 = 0 : 16 = 0 \text{ r } 0$$

$$1 \cdot 2 = 2 : 16 = 0 \text{ r } 2$$

$$5 \cdot 2 = 10 : 16 = 0 \text{ r } A$$

$$2_{(16)}^0 \cdot 6_{(16)}^4 = A20_{(16)}$$

$$\begin{array}{r} 08^1 \\ \underline{3} \\ 288 \end{array}$$

$$8 \cdot 3 = 24 : 16 = 1 \text{ r } 8$$

$$1 + 13 \cdot 3 = 40 : 16 = 2 \text{ r } 8$$

$$3_{(16)}^0 \cdot 6_{(16)}^3 = 288_{(16)}$$

$$\underline{4 \cdot 6 = 4,000 : 6 = 0,AAA}$$

$$\begin{array}{r} 1 \\ \underline{40} \\ 1 \\ \underline{40} \\ 1 \\ \underline{40} \end{array}$$

$$40 = 4 \cdot 16 + 0 = 64 : 6 = 10 \text{ r } 4$$

$$40 = 4 \cdot 16 + 0 = 64 : 6 = 10 \text{ r } 4$$

$$4_{(16)}^0 \cdot 6_{(16)}^{-1} = 0,AAA_{(16)}$$



$$2,000 : 6 = 0,555$$

$$\begin{array}{r} 1 \\ 20 \\ \hline 1 \\ 20 \end{array}$$

$$2 \cdot 16 = 32 : 6 = 5 \text{ r } 2$$

$$0,555 : 6 = 0,0E3$$

$$\begin{array}{r} 1 \\ 05 \\ \hline 1 \\ 55 \\ \hline 1 \\ 15 \end{array}$$

$$5 : 6 = 0 \text{ r } 5$$

$$5 \cdot 16 + 5 = 85 : 6 = 14 \text{ r } 1$$

$$1 \cdot 16 + 5 = 21 : 6 = 3 \text{ r } 3$$

$$2_{(16)} \cdot 6_{(16)}^{-2} = 0,0E3_{(16)}$$

$$1 : 6 = 0,$$

$$1,000 : 6 = 0,2AA$$

$$\begin{array}{r} 1 \\ 10 \\ \hline 1 \\ 40 \\ \hline 1 \\ 40 \end{array}$$

$$1 \cdot 16 + 0 = 16 : 6 = 2 \text{ r } 4$$

$$4 \cdot 16 = 64 : 6 = 10 \text{ r } 4$$

$$0,2AA : 6 = 0,071$$

$$\begin{array}{r} 1 \\ 02 \\ \hline 1 \\ 2A \\ \hline 1 \\ 0A \end{array}$$

$$2 \cdot 16 + 10 = 42 : 6 = 7 \text{ r } 0$$

$$0 \cdot 16 + 10 = 10 : 6 = 1 \text{ r } 4$$

$$1_{(16)} \cdot 6_{(16)}^{-3} = 0,012_{(16)}$$

$$0,071 : 6 = 0,012$$

$$\begin{array}{r} 1 \\ 00 \\ \hline 1 \\ 07 \end{array}$$

$$0 \cdot 16 + 7 = 7 : 6 = 1 \text{ r } 1 \quad 1 \cdot 16 + 1 = 17 : 6 = 2 \text{ r } 5$$

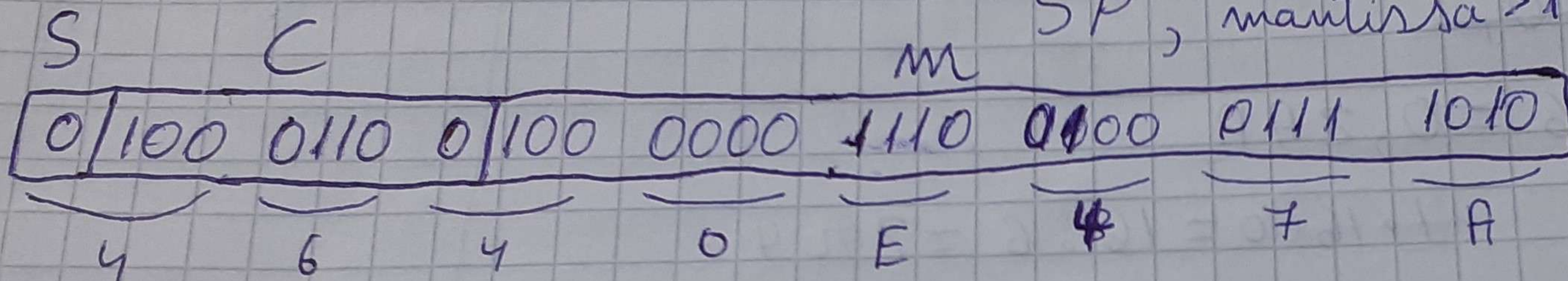


Subject III, option 4 (Student 2)

Jorja Jonut

$M_{(16)} = 4640E7A_{(16)}$  Floating point repr.  
SP, mantissa > 1

Group 914



$$C = 10001100_{(2)} = 2^7 + 2^3 + 2^2 = 128 + 8 + 4 = 140$$

$$C = 127 + e \Rightarrow e = 140 - 127 = 13$$

$$x = 1,100000011100000111101_{(2)} \cdot 2^{13}$$

$$x = 110000000111000,000111101 = 000111101_{(2)} = 0.75_{(8)} = 0.12_{(10)}$$

$$x = 2^{13} + 2^{12} + 2^5 + 2^4 + 2^3 + 2^0 = 8192 + 4096 + 52 + 16 + 8 + 1$$

$$= 12345 + 0.12 = \boxed{12345,12}$$