WorkSheet Problems

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Task 1 BNF?

First and foremost BNF stands for Backus Naur Form Computing. BNF languages are basic languages that allow for rules and reasons to be created and traversed through. BNF programming is important to know because it serves as the baseline and foundations for nearly all programming languages. It helps people understand the if this happens then this happens and forces users to find creative ways to make outputs using the limited BNF language.

Task 2: BNF Description of L1 <L17:= (<minus7) <L17 (<plus7) <L17 [< empty > < minus 7 := - Kminus 7 Kempty 7 < plus > = + < plus 7 1 < empty 7 Task 3: Parse Tree for L1 (=L17) 1. () <minus) <217 1 < empty 7 < Empty 7 1 - (--)(+++)<L17 MINUS7 KPIUS7 DEL17 < MINUS71 (Kempty 7 < minuso + Spluso + Eplus 7 Femptys < empty 7

Task 4-BNF Description of L2] <L27::= <numbers > <eqq7 <eqq7::= 0 0 < L27 < L27 <empty7 <numbers 7::= 1 2 131 < empty 7 Task 5 - Parse Trees for L2 1.0 <L27 < 6497) - Cey97) < numbers7 [<empty> <L27 < nklmbers7 2-32100 [<eq97] 3 KL27 Fnumberso (2997) 12 KL27 (Enumbers) (28497) 0 EL27 <AUMbers7] EC997] (empty) 0

Task 6 - BNF Description of L3 < 137 := (and < step 7) < 137 (Or < step 7) < 137 [(not <step7) <L37 / <step7 cempty7 < Step 7 := < Bool 7< Step 7 | < L37 < Step 7 (empty 7 < BOO17 :== #+ 1#f1<emply7 Task 7- Porse Trees for L3). (or #+) <137 ION (SFED7) [] <637 (BOOLT) KStep 7 [#f] (Cempty) (Cempty7) 2. (Cnd (not #f) #f) <L37 and Estep7 KL32 (noH<SHep7)< (Cempty 7) < empty 7 (SBOO) Step7 (Step7) sempty7 #1 (Sempty) (Boul) (Step 7) #f (rempty)

Task 8: BNF Description of LY <LY7:= < blygest 7 < medium 7 <small 7 500mbine 7 <smallest 7:= < compy 7 lone / two / three / four five / Six / seven / eight / nine < combine >:= < empty > 1 < medium > 1 < prefix > ty < medium ?:= < empty > 1 + cn le levent twerve thirteent four teent fifteent sixteent seventeent eighteent nmeteen <prefix 7 :== twen | this | for | fit | Six | Seven leight | nine < biggest 7 :: = < smallest > hundred | < empty 7 lash 9; Parse trees for Ly 1. eighteen 2. five hundred <L47 KL47 < biggest 7 (< combine 7) (< smallest 7) Kbiggest 7 (COMbine 7) (Smallest 7) Ssmallest 7 [hundred [cempty] [cempty] (Cempty7) (Cmedium7) (Cempty7) leignteen five 3. Seven hundred fifty for <LUT TSbiggest7 [= combine 7] < smallest 7 [prefix] <smallest > 1 hundred Ity fif Seven

Task 10 BNF Description of L5 < 157 := < ald > < describer < show > kexit> (<n><n><n></> < add > < cdours > < Colour N > <17:=0 123 ... 1255 <Show 7:== <Show 7 < all 7 1 < Colour N7 Sdescribe7:== < colours 7 / < ColourN7 Scolowsz := Sallz Sallz ScolowNZ ColowNZ < Colour N> < all > COLOUR N> < COLONY N7 < COLON N7 < COLON N7 5all> 5all7 < Colow No:= < C17 < C27 < C37 - < C2557 Kexit7 :== Koodbye 7

Task 11 - Porse Trees for LS 1. Colours 2. Show pumple 3-2000 3. add (100 220 170) C28 1-(SLS7) 2. <LS7 < describer 5show 7 Rail7] < COLOWS 7 (Shaw) Purple 3. <L57 Sadd 7= raddy CKn7 <n7 <n7) < colow N7 220 [70] 100